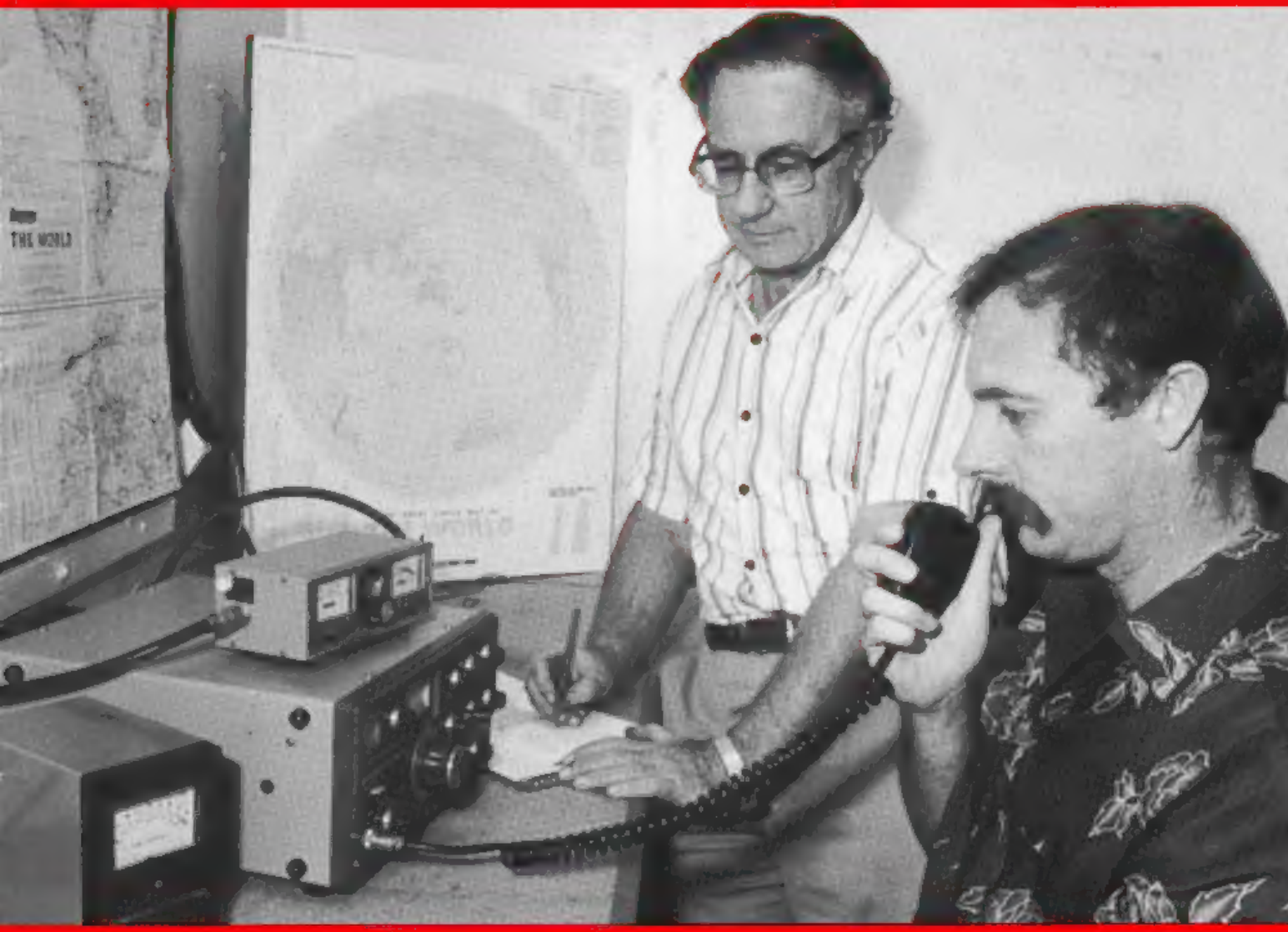
Amateur Radio

VOL. 50, No. 7 JULY 1982
Registered by Australia Post — Publication No. VBR 2589

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA



Featuring:

A TRIP TO THE ANTARCTIC
FAST SCAN TELEVISION
POETIC CW
1982 CONVENTION

EASTERN
COMMUNICATION CENTRE

168 ELGAR ROAD, BOX HILL STH., VICTORIA 3128

PHONE (03) 288 3107 ENQUIRIES

Short on Cash at the Moment?
We Understand.

At Eastern we can arrange low weekly repayments so that you can own that rig you've been drooling over.

Why wait any longer?

Come and talk to us —
we're friendly people to do business with.

—Keith. VK3ACE

TERMS TO APPROVED CUSTOMERS

Published monthly as its official journal by the Wireless Institute of Australia, founded 1910.

ISSN 0002 - 6859.

VOL. 50 No. 7
JULY 1982

amateur radio

Registered Office:
3/105 Hawthorn Road,
Caulfield North 3161.
Tel. (03) 528 5962

EDITOR:
BRUCE BATHOLS* VK3UV

TECHNICAL EDITORS:
BILL RICE* VK3ABP
EVAN JARMAN* VK3ANI
RON COOK* VK3AFW
GIL SONES* VK3AUI

CONTRIBUTING EDITORS:
BOB ARNOLD VK3ZBB
ROY HARTKOPF* VK3AOH
RON FISHER* VK3OM
ERIC JAMIESON VK5LP
LEN POYNTER* VK3BYE
MIKE BAZELEY VK6HD
KEN McLACHLAN VK3AH
REG DWYER VK1BR
ROBIN HARWOOD VK7RH

DRAFTING:
PETER KIMBER
LIZZ KLINE
DEREK FENN

ADVERTISING:
JOHN J. A. HILL VK3DKK

BUSINESS MANAGER:
PETER DODD VK3CIF

***Member of Publications Committee**

Enquiries and material to:
The Editor,
PO Box 150, Toorak, Vic. 3142

Copy is required by the **first of each month.** Acknowledgement may not be made unless specially requested. All important items should be sent by certified mail. The editor reserves the right to edit all material, including Letters to the Editor and Hamads, and reserves the right to refuse acceptance of any material, without specifying a reason.

Material should be sent direct to **P.O. Box 150, Toorak, Vic., 3142, by the 25th of the second month preceding publication. Phone: (03) 528 5962.** Hamads should be sent direct to the same address by the **1st of the month preceding publication.**

Trade Practices Act: It is impossible for us to ensure that advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore advertisers and advertising agents will appreciate the absolute need for themselves to ensure that the provisions of the Act are complied with strictly.

Victorian Consumer Affairs Act: All advertisers are advised that advertisements containing only a P.O. Box number as the address cannot be accepted without the addition of the business or residential address of the box-holder or seller of the goods.

Production: BETKEN PRODUCTIONS
5 Masefield Avenue, Moorooibark, 3138

Typesetting: MUELLER GRAPHICS PTY. LTD.
1a Levanswell Road, Moorabbin, 3189
Tel.: (03) 553 0292

Printers: WAVERLEY OFFSET PUBLISHING GROUP
Geddes Street, Mulgrave 3170
Tel.: (03) 560 5111

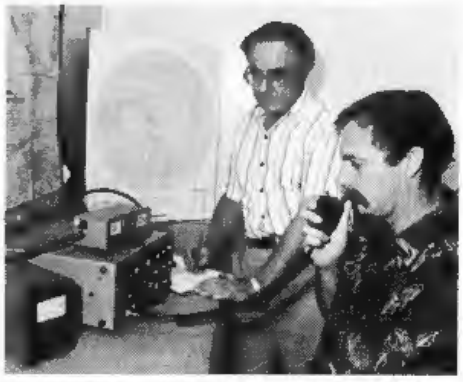
...in this issue...

A Love Letter 4
A Trip to the Antarctic 21
AR Special — 1982 Federal Convention 38
Anti-Repeater for the Kyokuto FM-2016A 20
CW — Poetic Abbreviations 12
Constructional Aid 11
Financial Graph 10
QSL Card Contest 5
RTTY Scheds 53
UHF Prescaler — The Easy Way 25
VK3RTV — Fast Scan Television 6

DEPARTMENTS

A Word from Your Editor 5
ALARA 23
AMSAT Australia 27
AR Showcase 26
Advertisers Index 58
Awards 22
Book Review 28
Club Corner 51
Commercial Chatter 51
Contests 34
Education Notes 23
Equipment Review — AEA Morse Keyer 13
Five-Eighth Wave 50
Forward Bias 50
Hamads 58
How's DX 18
Ionospheric Predictions 47
Letters to the Editor 55
Listening Around 24
Magazine Review 29
National EMC Advisory Service 16
Novice Notes — Power Meter 14
Obituaries 57
QSP 11, 13, 50
Silent Keys 57
Spotlight on SWLing 28
Try This 11
VHF-UHF — an expanding world 32
VK2 Mini Bulletin 52
VK3 Notes 54
VK4 Notes 54
WA Bulletin 48
WIA News 4
WICEN 44

COVER PHOTO



Barry VK2AAB (standing) and Ian VK2DLU operating VK2MB. See "Sydney to Rio Boat Race", p.51.

WIA NEWS

PHONE PATCH

An approach was recently made by Executive to the Chairman of Telecom to determine the present standing of the Institute's proposals for phone patching.

In reply the Chairman said that the whole question of private interconnects to the telephone network — and this includes amateur phone patch facilities — is under consideration by the Davidson Committee appointed by the Federal Government. Until such time as this committee hands down its findings Telecom is not in a position to further the Institute's request.

WAVCKA FOR VKs

The Executive has approved the rules relating to this Award for Australian operators. This means that the rules printed in the 1981/82 WIA Call Book on pages 36 and 37, including those parts printed in italics, are operative.

RD CONTEST RULES

The RD Contest rules and trophy scoring formula appear elsewhere in this issue. The "RD" is our friendly contest and every effort is being made to encourage PARTICIPATION — this is the reasoning behind the new trophy scoring formula, which is based on proposals submitted by VK6. ■

KNOXTRONICS
ELECTRONIC SERVICES

SERVICE SPECIALISTS for all types of RADIO EQUIPMENT — TELEVISION RECEIVERS — STEREO and HI-FI and VIDEO RECORDERS.
Sales and Service of CB Radio and Accessories, 27 MHz and UHF.

EASTERN VIDEO CENTRE

VIDEO LIBRARY SPECIALISTS, featuring latest releases from all major distributors. Video films to suit all tastes and requirements.

LIBRARY MEMBERSHIP ONLY $200 PER YEAR, giving you unlimited exchange (one Video Cassette at a time). All titles in VHS and BETA formats.

Also **Casual Video Film Rental Service.**
BLANK VIDEO TAPES at competitive prices
VIDEO RECORDER SALES and **RENTAL**
Special return mail service for country clients

8 DARRYL STREET, SCORESBY, 3179
PHONE (03) 763 8425
(SCORESBY SHOPPING VILLAGE)

W0607

* * * *

PARADOX

One day while walking up a stair,
I saw a man, who wasn't there,
He wasn't there again today,
Gee!!, I wish he'd go away!!

* * * *

A Love Letter to a 65 year old Husband . . . just Retired

From Lyrebird December 1981

My Beloved George, I welcome you home with pride and with pleasure. There may have been pleasure in it 30 years ago but there would never have been more pride. And I welcome you with a re-assertion of the vow I made to you 43 years ago. I still take you for better or worse. My pride lies in the fact that you have made it to retirement. This is a great achievement you know, as many are not so fortunate.

Since you first went to work you have manoeuvred your way past some formidable dangers . . . a couple of wars, cancer, heart attack, automobile accidents, mental breakdowns, and lightning. A man who has survived the perils of the last 50 years is a hero by just staying alive.

I'll want you to have a nap every afternoon because it will be good for you and because you deserve the luxury. I'll want you to sit up on week nights to your heart's content and see all the late movies you want. I'll want you to go to the doctor every six months for a check-up. I'll want you to come and go as you wish, fish, hunt, or play with your pals as long as you wish. I'd like you to think about enlarging your shack and would like you to spend untold happy hours rag-chewing with your cronies. I want you to take $400 out of savings and buy yourself some casual clothes for this great new adventure of your life.

Now for your instructions! . . . Stay out of my kitchen!! . . . Prepare a chart showing which of the household chores you intend to take over . . . Start by cleaning up your ashtray and any other mess you make during the day. I'll still take care of your evening and week-end messes, except in the shack . . . Prepare to give me two free afternoons a week to be with my friends . . . Have your eyes checked, then subscribe to a second newspaper, because we are going to have a lot of time on our hands, and news-reading will help to fill it . . . Set up in the bank, in your investments, or somewhere, an adequate sum of money in my name so I can get it in a hurry if I have an emergency to face alone . . . Read your life insurance policies and let me know what in the world they mean . . . Then go and make a Will — that is if you want your meals on time! . . . Be informed that when "retirement letdown" hits you in about a month, you will have ten days — no more — to feel sorry for yourself. After which you'll have to smarten up and get on with your new life.

I'm so glad, my dear, that you have come home in retirement. As soon as we we have become acquainted with each other, we are going to have a splendid time! Your loving and devoted wife, Jean (XYL VK2GT). ■

A Call to all holders of a

NOVICE LICENCE

Now you have joined the ranks of Amateur Radio, why not extend your activities?

THE WIRELESS INSTITUTE OF AUSTRALIA
(N.S.W. DIVISION)

conducts a Bridging Correspondence Course for the AOCP and LAOCP Examinations.

Throughout the Course, your papers are checked and commented upon to lead you to a SUCCESSFUL CONCLUSION.

For further details write to:

THE COURSE SUPERVISOR, W.I.A.
P.O. BOX 123,
ST. LEONARDS, N.S.W. 2065

W0514

a word from your EDITOR

Bruce Bathols VK3UV

HOW EFFECTIVE IS YOUR INSURANCE COVER?

From time to time we read of amateurs who have had severe damage caused to their antenna installations as a result of a storm (see April AR for such a story).

In the same storm which was featured in that issue, several other local amateurs also suffered extensive damage to tower installations.

Your editor was no exception, in fact the damage sustained was greater than that published — to the tune of around $1,800. This included a Nally tower, Tri-band yagi, VHF verticals and 16 el. yagi, rotator case cracked, coaxial cable stretched and allowing water to penetrate, etc.

It is pertinent to relate these details to you as we often take for granted that our aerial system is safe, and it is covered under our household insurance policy.

WELL, THINK AGAIN, AS I HAVE!!

My own situation is such that I have two insurance policies, one for the contents (which includes all radio gear) and another for the buildings. Both are with separate companies.

It eventuated that the company insuring the buildings finally accepted the claim, but not without heartache!!

The contents insurers were adamant that because of the major part of the system was installed on a steel pole embedded 9 feet into the ground surrounded by concrete, it was a PERMANENT fixture.

However, the "buildings" insurer thought otherwise, as most of the installation was of a "MOVABLE" nature it should come under the responsibility of the "CONTENTS" insurer.

The matter was finally sorted out, but it would have been much easier had I had the same company insuring both "CONTENTS" and "BUILDINGS".

A new antenna installation has been completed, with all new bright and shiny tower, antennae, rotator, cables, etc. — all paid for by the "BUILDINGS" insurer.

But that is not the end of the story — the saga has an unusual twist to it!!

I have now received a letter from the "BUILDINGS" insurer stating that "INSURANCE COVER FOR STORM DAMAGE TO YOUR AERIAL SYSTEM IS HEREBY DELETED FROM THE POLICY".

After checking with several other insurance companies, I discovered that, although it is unusual in most cases, it is quite legal to delete certain items from insurance policies and, in the event of a major claim such as mine, similar action may be considered by other companies also.

So there we have it — new antennae and tower — and no insurance cover.

Further enquiries have revealed a broker for "LLOYDS" insurers would be prepared to issue a separate insurance policy for around $4 per $100 of cover — in my case that is approximately $80 premium per annum. I have no option but to accept that insurance as no other local company would issue a separate insurance cover. I have been advised that most companies automatically extend their householder's insurance to cover radio masts, etc., but now a doubt exists.

You would be well advised to check with your own insurance company — just in case! ■

QSL Card Contest

A world-wide contest is being held in honour of the 25th JOTA, the 75th Anniversary of Scouting, and the 125th Anniversary of the Founder, Lord Baden-Powell.

RULES

(a) Cards in both categories must be designed by Scouts or Guides. Age limit 18.

(b) Contest is open to all young people who participate in JOTA and who are members of the Scout or Guide organisations which are part of the World Organisation of the Scout Movement, or the World Association of Girl Guides and Girl Scouts.

(c) Entries cannot be returned. They will be used for an international exhibit at the 15th World Jamboree.

(d) Each QSL card must be marked on the back with name of designer, street address, city, State, postal code, country, plus age and name of Scout or Guide unit, and Scout or Guide Association.

(e) Entries must be received in Geneva by 31st December, 1982. Winners will be announced by 31st March, 1983.

Mail to JOTA QSL CONTEST, World Scout Bureau, PO Box 78, CH 1211 Geneva 4, Switzerland.

There are 10 prizes — five for the best hand-made QSL and five for the best printed QSL cards. ■

VK3RTV - Fast Scan Television Melbourne

Peter Cossins VK3BFG
14 Coleman Road, Wantima South 3152

VK3RTV is Melbourne's Broadband Amateur Television Repeater and is located high in the Dandenong Ranges, approximately 40 km from the city. The original licence for this repeater was granted on the 5th of September, 1978, and an experimental prototype was pressed into service shortly after, operating under supervision from the excellent VHF/UHF Frankston QTH of Les Jenkins VK3ZBJ.

Early in 1979 this prototype was moved to Box Hill College of Technical and Further Education using a unique omnidirectional quad array for an antenna built by Rod Letts VK3ZLW, Dave Luft VK3YMP and myself. Unfortunately the site proved to be only suitable for a limited coverage, but mobile experiments carried out by Rod, Dave and myself showed that the antenna design had merit for a complete 360 degree pattern if a more suitable location could be found. Shortly after these experiments, a prime mountain site became available through Brian Baker VK3HB, and it was decided to move VK3RTV as soon as a suitable antenna system could be designed and built to suit this new location. A small weekend task force headed by Les Jenkins and myself was formed and the manufacturing and testing facilities of Les' company, Microlink Pty. Ltd., was made available. From memory the task force comprised Rob Leversha VK3ZLJ, Rod Letts VK3ZLW, Col Fisher, then VK3YII, Dave Luft VK3YMP, Les Jenkins VK3ZBJ and myself.

The group assembled on a Saturday morning at the factory with the intent of building and testing the antenna system within one day! An initial conference was held and discussion ensued on the radiation pattern required, desirable gain and how we could achieve this within the resources available. Since a 180 degree pattern would serve the Melbourne and Metropolitan area it was decided to construct an array of three element yagis for the input and output frequencies. Construction then immediately proceeded using an assembly line technique and the required number of radiators produced within a couple of hours. Each of the yagis had a folded dipole driven element, with a balun to provide a coaxial feed — how do we interconnect all of these so that forward radiation from all of these will be in phase with a single feedpoint to a 50 ohm coaxial cable????

Les came up with the solution — why don't we connect each yagi directly with equal lengths of coaxial cable to a COMMON FEEDPOINT and then use a L-C matching network to transfer whatever impedance we have to 50 ohm resistive! We all set about cutting up lengths of cable and Les built the matching network from a couple of 15 pF trimmers and a hairpin loop of wire, electrically the same as can be found in Amateur Radio Handbooks for HF, but with a mechanical realisation so tiny that it fitted in a small Eddystone type metal box.

Now for the testing. Will we have a match to 50 ohms and, just as importantly, will the array radiate with the desired gain and omni pattern?

To set up the matching network we used a signal generator, directional coupler and spectrum analyser as shown in Fig. 1. After adjustment of the matching network, the returned power from the antenna was greater than 40 dB below the reference forward level; a very satisfactory result.

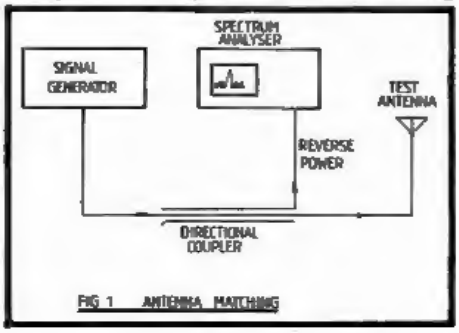


FIG 1 ANTENNA MATCHING

To check the forward radiation we used a reference dipole with a signal generator driving the antenna and the spectrum analyser as a calibrated receiver. The yagi arrays achieved an approximate 180 degree pattern with a gain of 5 dB over the reference. Small minor lobes occurred with a gain of 3 dB as shown in Fig. 2 — not a bad effort for a day's work!

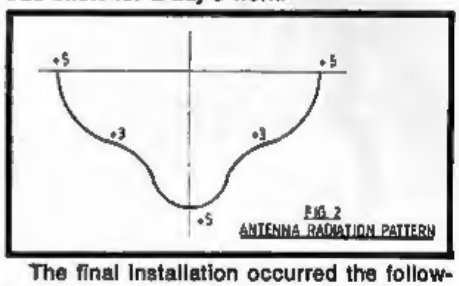


FIG 2
ANTENNA RADIATION PATTERN

The final installation occurred the following weekend with Rob Leversha climbing to the top of a 150 foot tower for about three hours while antenna and cable were hoisted by pulleys to their final resting place. Shortly after VK3RTV MK2 was in operation.

After a few months of operation, VK3RTV MK3 was installed, complete with a simple tone access control system and an improved receiver

This unit was also reasonably short lived and was replaced by VK3RTV MK4, which was based around a low level UHF to UHF translator with an I-F output/input of 38.9 MHz (European TV I-F) but still controlled by the simple tone access system of the previous model.

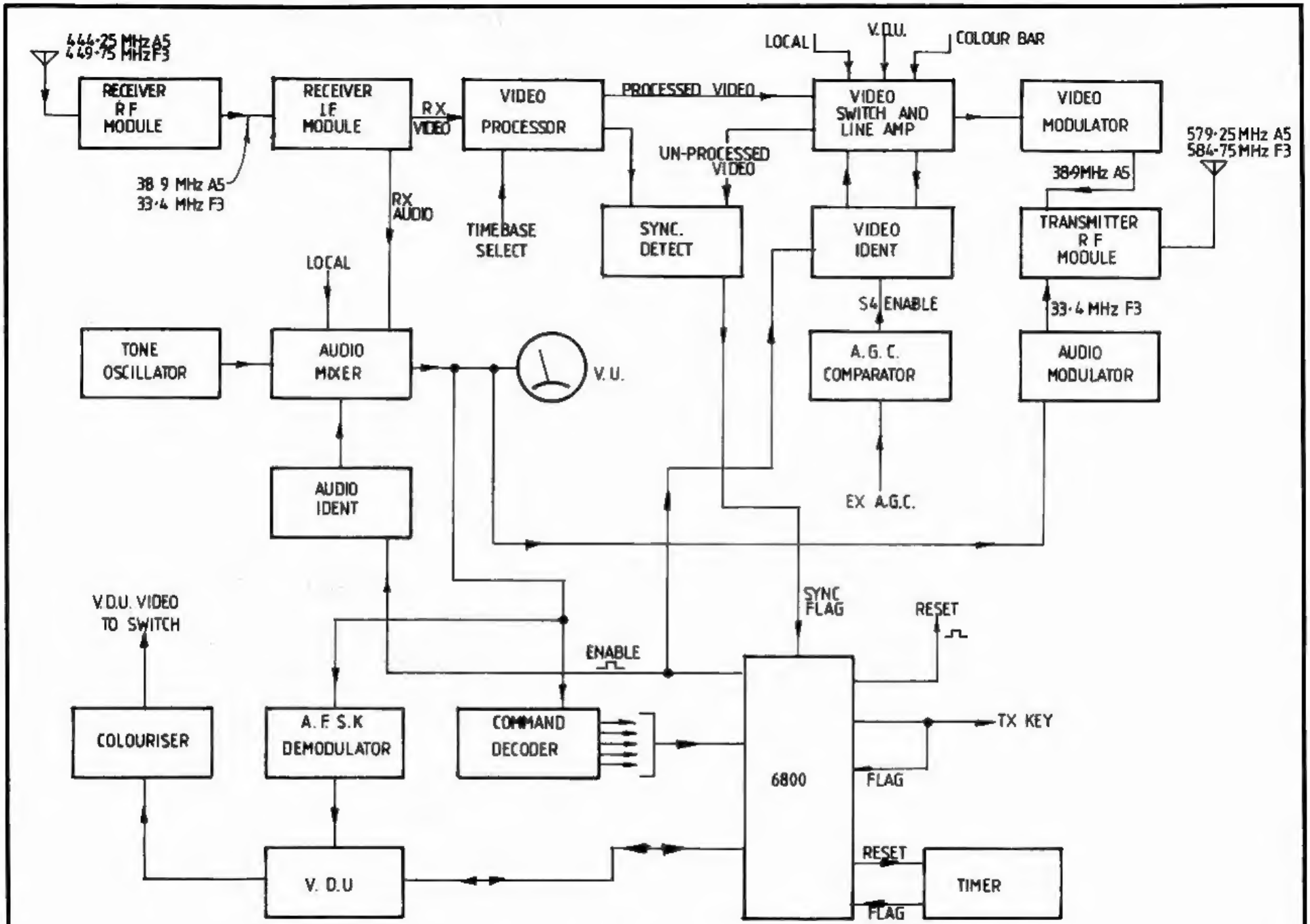
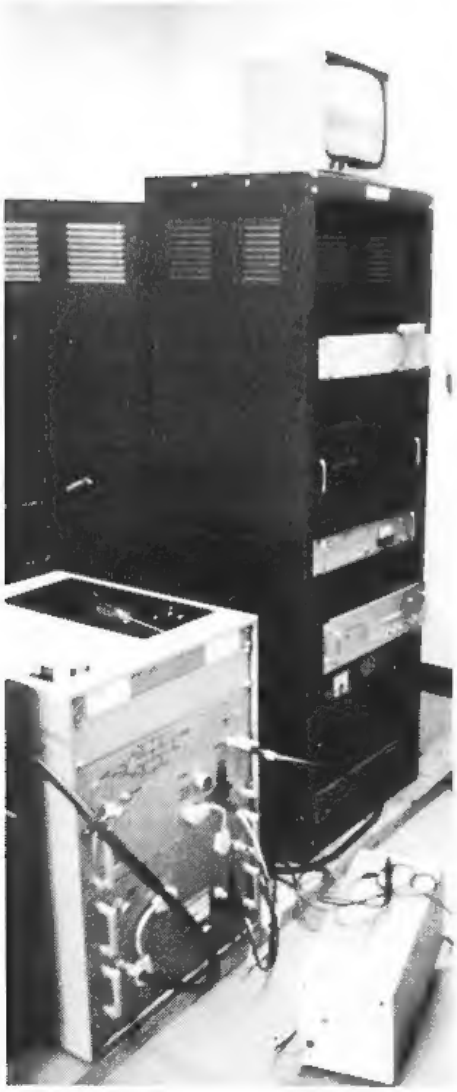


FIG3 BLOCK DIAGRAM VK3RTV

In order to keep up with the Jones (the ever active VK5 group), VK3RTV MK5, complete with microprocessor control, internal VDU, standard telephone touch tone user access and improved video and audio mixing was commissioned into service during October 1981.

VK3RTV MK5

In the block diagram (Fig. 3), the UHF to UHF translator provides the receiver RF module and the transmitter RF module. The receiver RF module has a local oscillator injection of 483.15 MHz derived from a 40.2625 MHz reference and a mult. by 12 chain. Input frequencies of 444.25 A5 and 449.73 F3 are transposed to an I-F of 38.9 A5 and 33.4 F3 respectively. I-F amplification, I-F bandpass and group delay correction and RF and I-F AGC are all provided in this module. The maximum I-F output level from this module is 0 dBm (0.224V in 50 ohm), although the strongest amateur signal I have seen is —5 dBm at this point. It would take an increase of power much in excess of 5 dB to reach 0 dB reference as receiver AGC is in operation reducing the overall gain of the unit with of course the desired improvement in S/N.



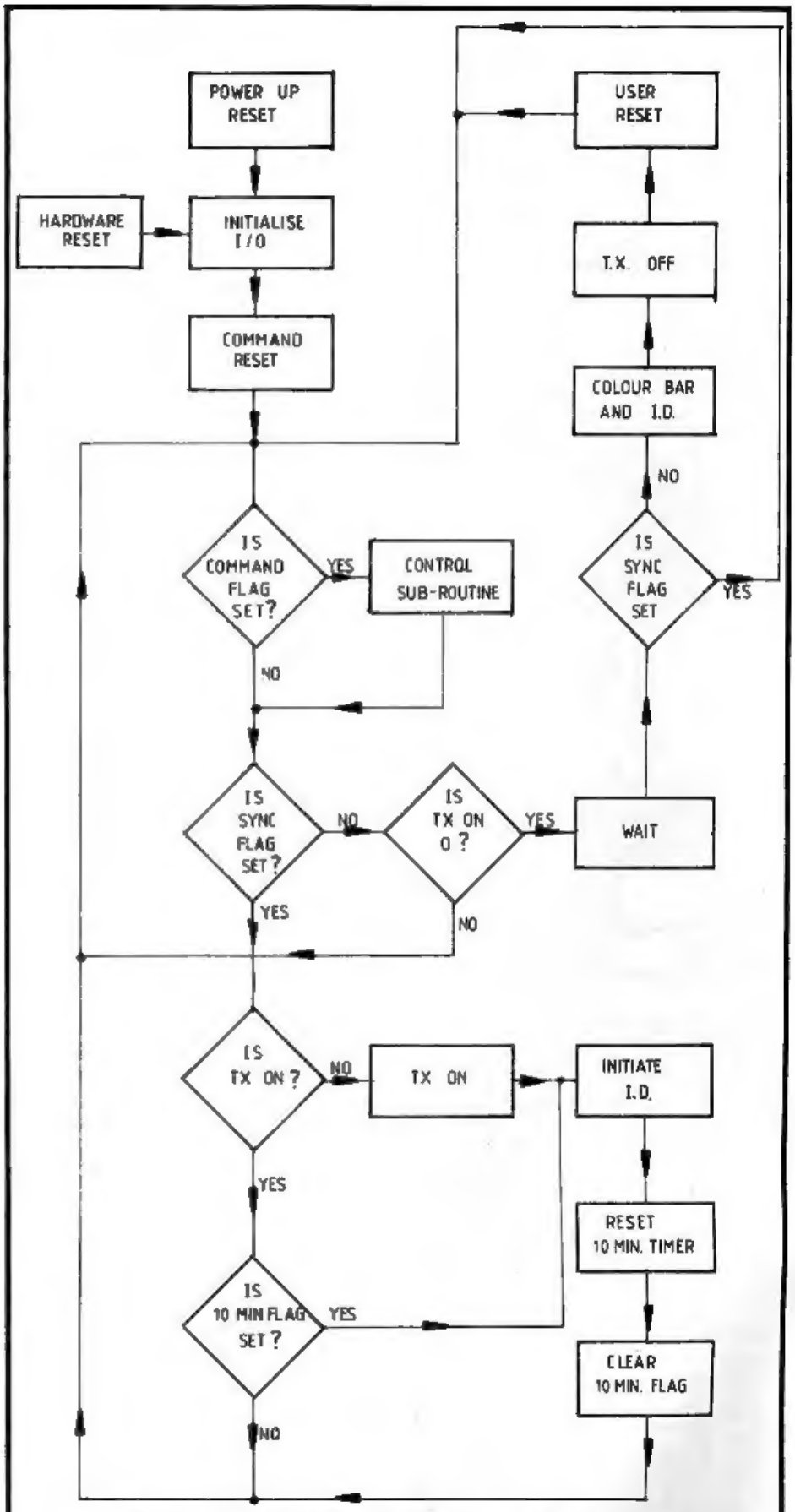


FIG 4 MAIN CONTROL PROGRAM VK3RTV

The receiver I-F module is based around a modified Phillips K12 system with AGC and video and audio line drivers. The video level at this point is 1.5V composite and the audio 1V P-P.

The receiver audio output is fed to an audio mixer which has as its other inputs, audio ident, tone oscillator and local mic., the first three selected under the control of the microprocessor I/O. The output of the audio mixer drives the transmitter audio modulator, the command decoder and the Kansis City demodulator for the user VDU function.

The receiver video output is fed to a video stabilisation and processong amplifier which regenerates all synchronising pulses, luminance, chrominance and burst and recombines for an improved composite signal ready for modulation. This stabilised and regenerated signal is then fed to a video switch and line amplifier which has as its other inputs VDU, colour bar, video ident, and locale as before all inputs except locale under the control of the microprocessor I/O. The video ident has an AGC comparator on board which switches in an S4 report when the AGC voltage reaches a predetermined level. (Signal reports given for ATV range between S0 and S5, S5 being completely noise free.)

This facility is a left over from the MK4 control system and of course it is now possible to have an A-D converter on the AGC line and allow the processor to issue the complete range of signal reports — something for the future.

The output of the video line amplifier drives the video modulator. Unprocessed video is also passed to a sync. detect circuit which will only give an output if the incoming signal is properly video modulated. This output is called the sync. flag and is interpreted by the microprocessor as the signal to turn on the transmitter. Absence of this flag will cause the system to go into its "tail" routine.

The Audio Modulator is a 10.4278 MHz active crystal varicap circuit with a mult. by 36 producing an output frequency of 375.4 MHz and a deviation of 50 kHz. This is mixed with a local oscillator signal of 342 MHz for a final output frequency of 33.4 MHz and a deviation of 50 kHz.

The Video Modulator is crystal locked to 38.9 MHz, mixed with the output of the sound modulator and passed through a vestigial sideband filter. This combined signal with a vision carrier level of 0 dBm is fed to the transmitter module of the translator. This module has a crystal reference of 51.5125 MHz and a mult. by 12 chain with an output of 618.15 MHz. This is mixed with the modulated vision and sound I-F signal with a resultant output of 579.25 A5 and 584.75 F3. A series of linear amplifiers then provide an output of 10 watts to the antenna.

VK3RTV CONTROL AND COMMANDS

The control of this television repeater is performed by a 6800 microprocessor based system. This has automatic power up reset, manual and remote reset, decodes all command requests, "talks to the VDU", monitors all timing and responds to sync. flag status.

All functions of the repeater are related to the external 10 minute real time clock which is set and reset by the processor at the start and finish of each duty cycle. Video and audio ident are given every 10 minutes and at the start and finish of every transmission. A short tail is provided at the end of a user transmission to allow for break in after which the repeater comes up with colour bar and identification and drops out. User access is almost again immediately available but the real time clock will have been reset so the repeater will identify once more to signify the start of a new 10 minute period.

Fig. 4 shows the main control loop for the microprocessor, the control subroutines really taking up most of the memory in the system ROM.

User commands currently available are:—

TT0 — Colour Bar and Tone (10 min.).

TT1 — User VDU (300 baud Kansis City, 20 min.).

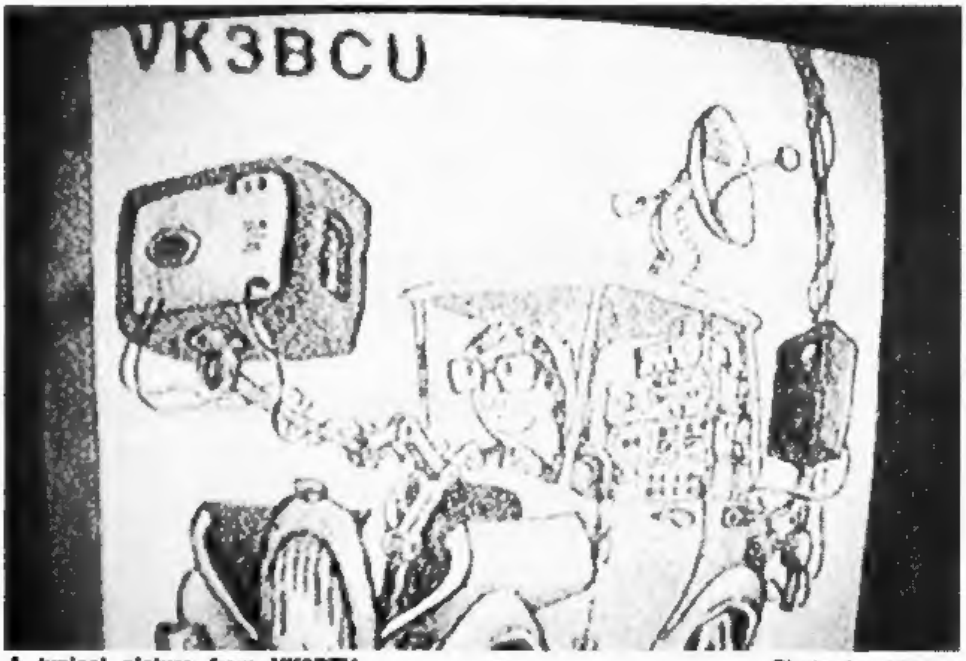
TT0.TT1 — Sync. Regenerator Time Constant.

TT0.TT2 — VK3RTV Menu (describes operation and functions).

TT1.TT2 — Visual ID and Signal Report.

There are a total of 14 commands available which leaves plenty of room for expansion, together with 20 I/O lines unused on board the processor, so again room for expansion.

Due to significant power line transients in the vicinity of VK3RTV and although some transient suppression has been provided in the power supply circuits, I decided to include a hardware reset circuit to be available by remote touch tone control. In retrospect this was a good move as it has saved me a number of trips up the hill just to press one button after the SEC has had a field day tap changing or whatever they do to upset VK3RTV. SEC voltage at VK3RTV has been measured as low as 180V at times and we have experimented with a couple of AC regulators to overcome this problem. We had one going very well for a couple of days but unfortunately it caught fire! Any donations in this area would be gratefully accepted. Talking of donations, VK3RTV is the most expensive amateur repeater operational in Australia (even more than John VK5RTV, Hi) and I would like to thank all amateurs who have constantly dived into their pockets to support this project. A special thanks also must go to all those friends who have assisted me and to Mr. Brian Baker VK3HB, who has quietly worked behind the scenes to maintain support for the project. ■



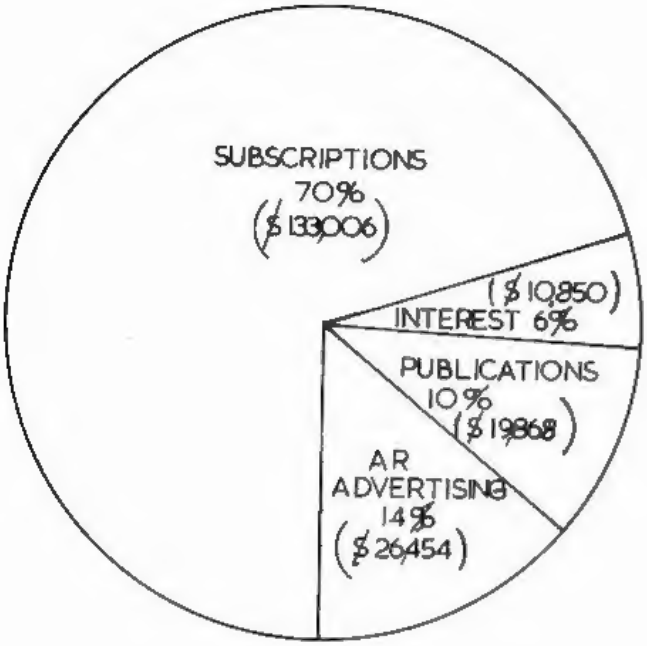
A typical picture from VK3RTV Photo by VK3UV

When You Buy Equipment

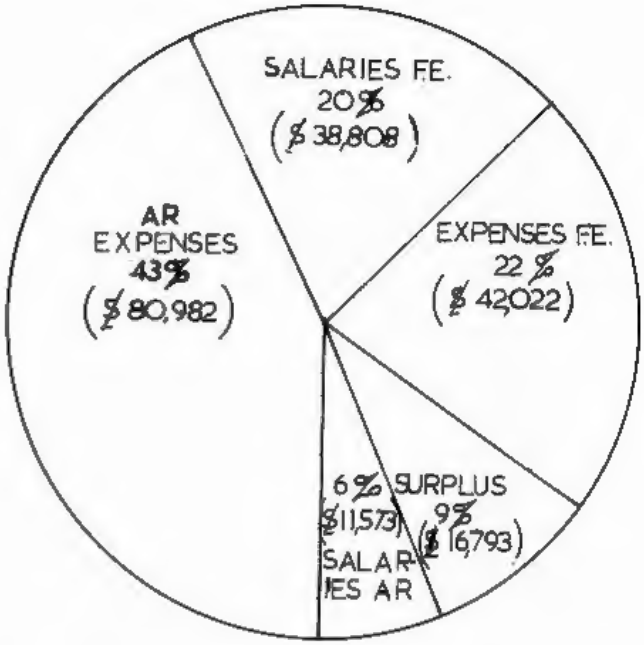
Say You Saw It In AR

Financial Graph

INCOME



EXPENDITURE



NEW

WIA METAL BADGES

Standard WIA Badge (stickpin)
Fresh stocks both red and blue

- International Diamond with call sign space (stickpin)

  NOW AVAILABLE.

- Order from your Division or direct from Magpubs, P.O. Box 150, Toorak, Vic. 3142.

- All badges $2.00 each plus 30c postage.

WIA BOOK

Volume 1

You cannot help us with Volume 2 unless you know what is in Volume 1.

Give yourself a treat — a membership 'must'.
Buy one now.

From Divisions or Magpubs,

Box 150, Toorak, Vic. 3142

NEW

TRY THIS with the Technical Editors

If you have ever wondered how you might reduce the diameter of aluminium tubing, but weren't sure how, then here is the answer.

There are "tube cutters" on the market which use a rolling knife to cut copper, aluminium and even steel tubing. These use a cylindrical cutter and in the less expensive versions the tool is rotated around the tube while a handle is turned to keep pressure on the cutter as it cuts through the tubing. If the cutter or knife is replaced with a roller of different form then the tool may be used to manipulate the tube to reduce its diameter by appropriate amounts at various places.

The most suitable types of cutter are "RIGID" and those consisting of a pair of rollers which press the cutter into the tube. Cheap tools are of little use because the body will fracture even in normal use.

Fig. 1 shows a sketch of a tool and profiles of three different inserts.

This forms a handy tool for reducing the inner diameter of the outer tube in a telescoping pair or for locking the inner tube in position. The inserts or manipulating tools are easily made from mild steel in a small lathe.

Syd VK3ASC ■

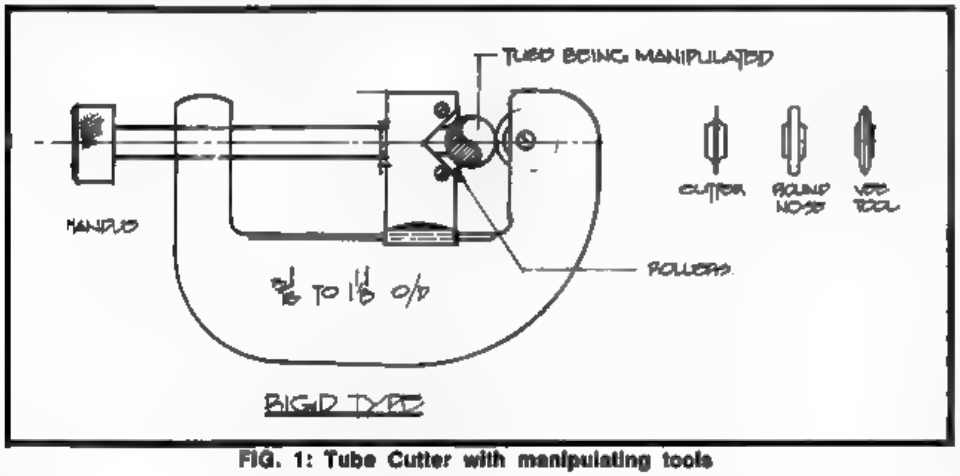


FIG. 1: Tube Cutter with manipulating tools

Constructional Aid

J. Swan VK2BQS
21 Tungarra Road, Girraween, 2145

Have you ever wasted much time sorting out small components only to have a repeat performance while assembling the project?

Here is a simple sorting and storage aid:

PARTS LIST

1 ice-cream container (empty).
1 piece of strong paper larger than container top. (Back of AR envelope works well.)
Some sellotape

METHOD

Place paper on top of container and by pressing hard imprint the shape on the paper

Cut around outline allowing about 20mm margin. Cut in from edge of paper to outline at about 25mm distance to form tabs. (Corners of square containers need closer spacing.) Bend all tabs at right angles to form a cap for the container.

Fasten cap to container by liberal use of sticky tape. Run strips of tape across paper to reinforce and to serve as line markers.

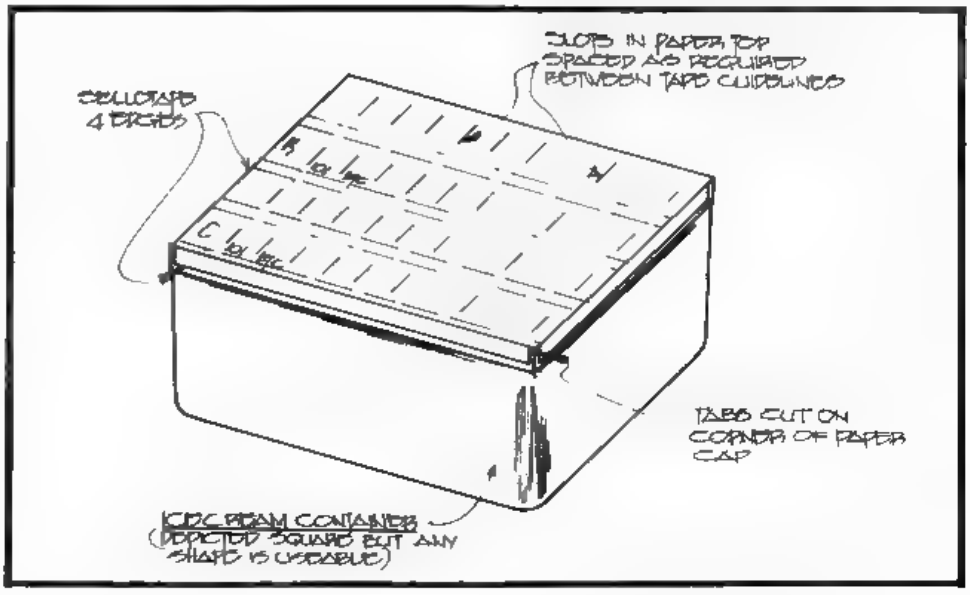
Using a very sharp small kitchen knife make a series of small slots in the paper between the guide lines. Number of slots is related to size of project.

Mark each slot as appropriate; e.g., 1-50, 101-150, 202-250 if working off numbered parts list, or by component values if working off diagrams.

USAGE

When extracting components from the junkbox or from that plastic bag beloved by retailers, place each item in its appropriate slot.

Assembly is simplified as each item is readily identified, can be easily selected and progress can be continuously monitored. Resistors, capacitors, transistors, diodes and trimmers all can be held in the slots and the unit is reusable if markings are adjusted. ■



Eastern Bloc Communications

From Amateur Radio News Service Bulletin
October 1981

Anyone who operates CW on the HF bands is aware that many amateurs in Eastern Bloc countries are using home-built rigs. The signals, in many cases, are an absolute disgrace! I cannot argue the point that it is just as easy to produce a T9 note as it is a T3. The fact of the matter is that at least these amateurs are building, and they are experimenting. Presumably the "State" ensures that components are available. I wonder if our political leaders are aware of this vast pool of skilled operator/technicians that is being developed, or if amateur radio is considered a sport rather than a hobby. ■

CW — Poetic Abbreviations

Marshall Emm VK2DXP
Box 362, Goulburn 2580

Telegram boy to Postmaster — Hand Key to Telex, with a poetic masterpiece which will be appreciated by all who enjoy morse code.

The Goulburn Amateur Radio Society was honoured to be addressed recently by Mr Don Whelan, the Postmaster at Goulburn. Mr. Whelan worked his way up in the Post Office from the lowly status of telegram delivery boy at age 15, 40 years ago in Kapunda, SA.

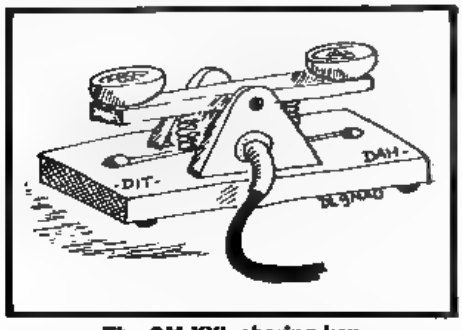
Mr. Whelan served as a telegraphist for many years and occasionally still administers Morse code examinations to amateur candidates unable to travel to Sydney or Canberra.

His address included many interesting anecdotes from his own experience, and although he has never had anything much to do with radio, he was delighted to learn that some of the old traditions are still alive and well in the amateur service.

Mr Whelan said that manual telegraphy was in use in NSW until 1959, when the TRESS machine (similar to a TELEX) was introduced. He had never seen the early model teletypes which produced a gummed tape, which was cut up and stuck on a telegram form by the operator. These predecessors of the TRESS machine resulted in the obsolescence of manual telegraphy in the United States when they were introduced in the 1930s'.

When he started work as a messenger, one had to be able to send and receive ten 20-word messages in 15 minutes (about 13 w.p.m.) to qualify as a beginning telegraphist; most traffic was handled at 20 w.p.m. Liberal use of abbreviations (called "cutting down") increased the effective speed considerably.

Abbreviations are, of course, widely used in CW working, but they are only useful as long as both parties understand them. Mr Whelan offered the poem below as an example of this difficulty. It was written by an old-time telegraphist by the name of "Spru" Spruhan, who was evidently as qualified for poetry as he was for Morse!

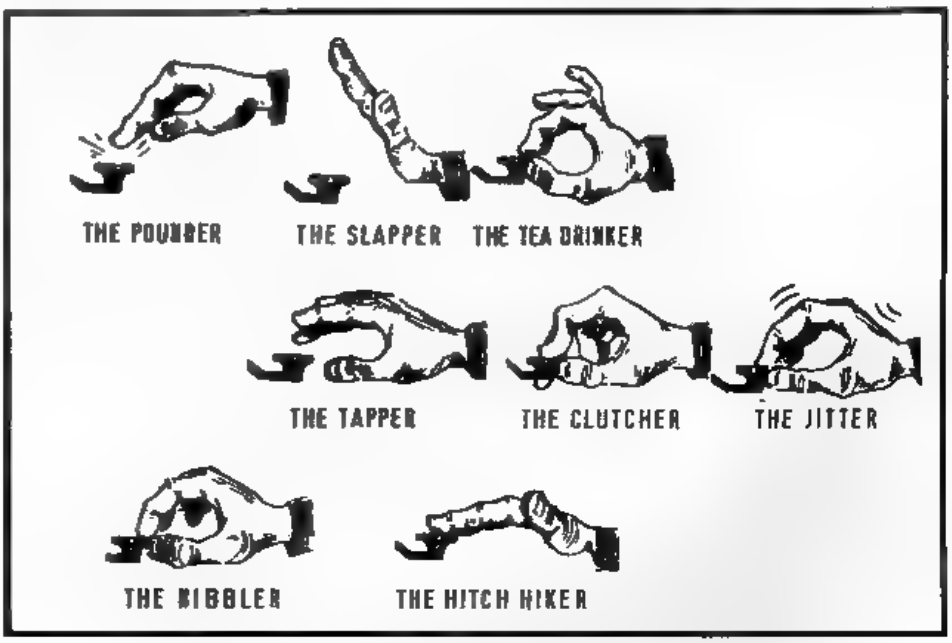


The OM-XYL sharing key
from cq-DL 2/82

Coming Round the Bend

By "Spru" Spruhan

I well remember Charlie Teede,
Who used to work the races;
No need, indeed, to ask for speed,
He'd pace it with the pacers.
Lord help the man who "broke" him once
Or questioned his "creations";
On him a flood of scorn was turned,
The atmosphere with brimstone burned,
And Pitman, green with envy, squirmed
At his abbreviations . . .
TE FIELD GOT WL AWA TO T/
& AS TY SETTLED DWN
THE SHICER 1ST T BK TE LI
WS FLWD BI JO BROWN.
IN CLOSE PROXIM WS TIRED TIM,
TN CME ARBTRATN,
BHND TE BUNCH WS CNTR LUNCH,
GD LUCK & HI TAXATN.
TY WHIZZED ALNG (and so did Charles)
WTOUT TE LEAST CESSATN.
C R T B TE TOPWT JUMPED
& GOT ON TRMS WI SHICR,
WO TN & TRE HS BUNDL DUMPD
WH LABLD HM A TWICER.
I scrambled after Charlie
Like a trailer round a bend,
Then gave OK — but queried:
C R T B U SEND.
NOW WHAT IS THAT IN AID OF?
ENLARGE A BIT MY FRIEND.
The sounder nearly hit the roof
As Charlie scorched the line.
U ORT T B ON TE RABTPROOF
OR UP AT DOODLEKINE.
CHASIN PODDIES RND TE YD
SHD B UR CHF PASTIME.
T TNK U CDNT WRK IT OUT
IT NRLY MKES ME SIK.
ANI OLE GIN OR ROUSABT
CD WRITE IT W A STICK.
FANCI A MAN WO CALLS HMSF
A TGST ASKG TT
A RECORD O S VACUUM
IS LOCATED NEATH UR HAT
D U WANT IT IN OILS BI LAMBERT?
OR CARVD ON A MARBL STONE?
OLE WINJA MORTILL CD TKE IT
& UD NVR HR A MOAN,
NOT SPELT OUT LI IVE DUN FR U
BT CUT DOWN T TE BONE.
WL I MST SA ITS TE BST DSPLA
OF IGNRCE IVE HRD,
O ALL TE SQUTRS IN W A
UR CRTNLI TE BIRD
& ANI HRSH REMKS IVE MIST
TY ALL CN B INFERD.
C R T B, ITS KNOWN BI ROTE,
WT WD U HA ME SND?
ITS CMG RND TE BND, U GOAT
COMING ROUND THE BEND!



KEYING STYLES — from Rad. Comm., March, 1982.

EQUIPMENT REVIEW

A Review of the Advanced Electronic Applications Morse Memory Keyer Model CK-1

Bruce McKenzie VK3VF
The Esplanade Mt. Martha

Although the Advanced Electronic Applications keyer model CK-1 has been designed for the serious CW operator, I am inclined to think that anyone mildly interested in CW operation cannot help but be intrigued by the versatility of this keyer. It does appear to meet any situation the operator may require these days. All functions with the exception of memory load and send (a slide switch) and sidetone volume are controlled by appropriate combinations of keypad buttons. Memorising these combinations does take practice but it is soon realised that there is a pattern of operation formed by the keypad buttons.

GENERAL

SPEED CHANGE
Two methods of speed control are available, variable and preset. Two preset speeds from 2 w.p.m. to 99 w.p.m. can be stored and recalled, while an infinitely variable speed, up and down, is available also.

SIDETONE
Whilst the sidetone is set for 500 Hz when the keyer is at first switched on, it is variable over a wide range, by pressing the appropriate keys and holding until the desired frequency is reached.

AUTOMATIC OR SEMI-AUTOMATIC OPERATION
When the keyer is at first switched on, it is set for automatic iambic operation, but the keyer may be operated in the semi-automatic mode if required.

WEIGHTING
Apart from the normal dot equal to the intra character space length (dot space ratio of 1.0) the dot space ratio can be varied from 0.5 to 1.5.

DOT DASH MEMORIES
Because either of the dot or dash memories can be disabled at will, using a double paddle key provides a range of short cuts in sending various characters with a minimum of key movement.

TRANSMITTER TUNING
To allow transmitter tuning, the keyer's keying transistor can be actuated and on completion of tuning, at a touch of the key, the keyer is disabled.

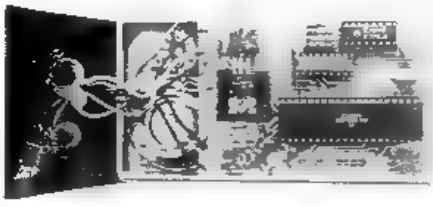
MEMORY OPERATION

MEMORY LOCATIONS
The CK-1 has ten separate variable length memory locations. The total memory length is about 500 characters (the actual length is dependent on the length of characters and the length and number of pauses, etc.), which may be divided into the ten locations in any order. Each memory location length is automatically adjusted during message loading.

MEMORY MESSAGE LOAD
Two methods of memory loading are available, real time loading and automatic character and word space loading. In both modes, memory loading does not begin until the first character is started. This prevents an undesirable pause at the beginning of the message play back.

MEMORY ERASE
Operation of the on/off switch erases the entire memory, or individual memory locations can be selected and erased by moving the memory load/send switch to the load position.

EXTRA WORD OR CHARACTER SPACES
Insertion of a word or character space in real time memory loading will stop the real time load of a pause, the next keyed character will restart pause loading



MEMORY FULL WARNING
When the memory is full, the CW sidetone pitch will decrease. At this point, loading is automatically terminated. If further loading is desired, it is then necessary to erase one of the other messages

MEMORY SEND OPERATION

SENDING A MESSAGE
Any one of the ten loaded messages may be sent as selected. These messages can be interrupted at any time and the key operated to insert additional information, i.e. call signs and contest numbers.

EDIT CAPABILITY
Messages in memory may have additions or deletions made from a selected point to the end of that message location.

CONCLUSION

The purchaser must provide his own key and 12 volt source to operate this keyer. It is felt though, that most amateurs do already possess a favourite key, and these days 12 volts DC is readily available from existing equipment.

Mounting the 12 volt supply jack at the rear of the instrument with the other connectors, instead of at the side, would be an improvement

This test unit was made available from Hy-Tech Distributers, Building 51, Archerfield, Qld. 4108. ■

QSP

KEEP THESE OUT OF REACH

The button-sized mercury batteries often used in cameras, watches, etc., can pose a danger to small children. If a small tot pops the battery in its mouth and accidentally swallows it, it could prove fatal.

Each battery contains about 2 grams of mercuric oxide — nearly twice the lethal dose for a child. The battery cases may deteriorate rapidly in stomach acids.—WORLD RADIO, February 1982 ■

NOVICE NOTES

Edited by Ron Cook VK3AFW
7 Dallas Avenue, Oakleigh 3166

Novice Power Meter

Now that winter is upon us, perhaps you have a spare rainy afternoon. Why not use it to build a useful instrument.

RF power meters for HF operation are easy to build. Every novice needs one some time, so why not try this one. Its cost should not be more than $10. If you have a small "junk" box or are a canny frequenter of second-hand or disposal shops carrying electronic lines, then it will cost much less.

The circuit is shown in Fig. 1. R1 is a 10 watt low-reactance 50 ohm dummy load resistor. Diode D1 and C1 are a peak rectifier and R2 and R3 are range-setting resistors for meter M1 to in combination indicate peak RF voltage.

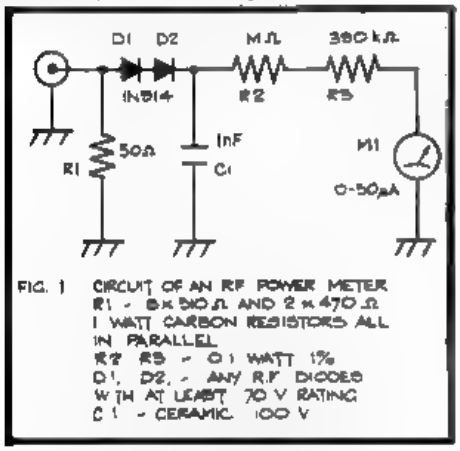


FIG. 1 CIRCUIT OF AN RF POWER METER
R1 - 8 x 390 Ω AND 2 x 470 Ω 1 WATT CARBON RESISTORS ALL IN PARALLEL
R2 R3 - 0.1 WATT 1%
D1, D2, - ANY R.F. DIODES WITH AT LEAST 70 V RATING
C1 - CERAMIC 100 V

If a 10 watt carrier is applied D1 will charge up C1 to a peak voltage Vp. We can calculate Vp as follows:—

$$\text{Power} = V^2/R1$$

Where V is the r.m.s. voltage.

As for a sine wave Vp = 1.41V we get:—

$$\text{Power} = Vp^2/2R1$$

for 10 watts and 50 ohms.
Then Vp = 31.6 volts

For the values of R2 and R3 shown the 50 uA meter would read 31.6/1.39M = 22.8 uA.

The component values chosen give 50 uA for 50 watts. Various points can be calculated as shown or the chart in Fig. 3 can be used. Use the CW curve: more about this later.

CONSTRUCTION

A small case is required to house the meter. The micro-ammeter should be fitted to the front panel. A piece of double-sided PCB material about 60 mm square can be used to mount a UHF connector, as shown in Fig. 2.

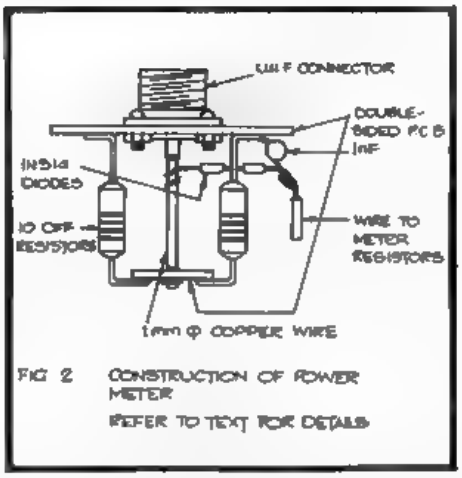


FIG. 2 CONSTRUCTION OF POWER METER
REFER TO TEXT FOR DETAILS

A 1mm diameter wire about 30 mm long should then be soldered to the connector's inner pin. A piece of PCB material 20 mm square can be drilled in the centre and soldered on as shown. Next fit the diode, and then the 10 resistors. The capacitor and the resistors and meter can be connected prior to fixing the assembly to the back of the case.

If the PCB is first cleaned with steel wool it will solder more easily. After fitting the connector and the second piece of PCB a light spray with clear metal lacquer will prevent tarnishing. Let the spray dry for an hour before soldering to the PCB. The heat of the iron will break through the lacquer.

ACCURACY

Better accuracy, particularly at lower powers, will be obtained if a hot carrier diode or a germanium RF detector diode are used for D1, D2. This is because these diodes require less voltage to conduct in the forward direction. In practice at 10 watts or more at HF the error is small if 1N914 diodes are used. The diode must have a rating of at least 70 volts for 50 watts. A single diode of double this rating would be even better.

The values for R2 and R3 were selected from readily available values: they are nominally 1.7 per cent low but as the meter movement accuracy is probably worse than 3 per cent and an overall accuracy of 10 per cent is as good as could be expected for this type of instrument, then more accurate adjustment does not seem worthwhile. Also because of the diode drop of perhaps 0.5V the values of R2, R3 could be a little less than nominal for best accuracy.

For powers giving less than 20 per cent of full deflection the meter reading will be progressively less accurate.

THROUGH-LINE CONNECTION

If your 50 ohm cable VSWR is less than 1.1 : 1 then the composite resistor R1 may be omitted and a 1 mH RFC used insead. This ensures a DC return for the detector circuit. Two UHF connectors could be used and their centre pins linked with a short length of 1 mm wire. If the VSWR exceeds 1.1 : 1 the meter error will exceed 10 per cent.

In use, one connector may be designated for connection to the aerial and the other for connection to the transmitter.

CONVERSION TO A PEP READING METER

If the time constant (discharge time to 37 per cent of initial value) of C1 shunted by R2 + R3 is of the order of a second, then the meter will read PEP. This requires a capacitor of 0.68 uF. Unfortunately, the effort of charging this capacitor in one quarter of a cycle of RF at 28 MHz is beyond the diodes. A compromise in the type of diode and the time constant of the circuit, taking into account the time constant of the meter may work. Some commercial circuits have done this. I chose one second as an all encompassing figure for speech and a wide variety of meters.

THERE IS ANOTHER WAY

A 100 pF capacitor could be used for C1. The ripple would be greater than for 1000 pF but still acceptable. The discharge time constant is now 0.14 msec. Hence the meter will read peak RF, while the RF is steady. If voice modulation is applied then the meter will try to follow the rectified RF, which varies at the audio rate. Because of the micro-ammeter's inertia there will be a reduced indication as the meter tries to show the average value — the DC component.

If a two-tone signal is applied we have a steady state condition so the meter inertia does not matter. The meter will show the DC component or average value of the rectified signal as shown in Fig. 4. The power indication will be 40.5 per cent of the peak so if the indicated power is multiplied by 2.47 we can read PEP on our $10 special. These figures are arrived at on the basis of the average value for a sine wave being 63.7 per cent of the peak.

For those who prefer to avoid the calculations, a second curve has been given for Fig. 3. Alternatively, the indicated watts can be multiplied by 2.47 to obtain PEP.

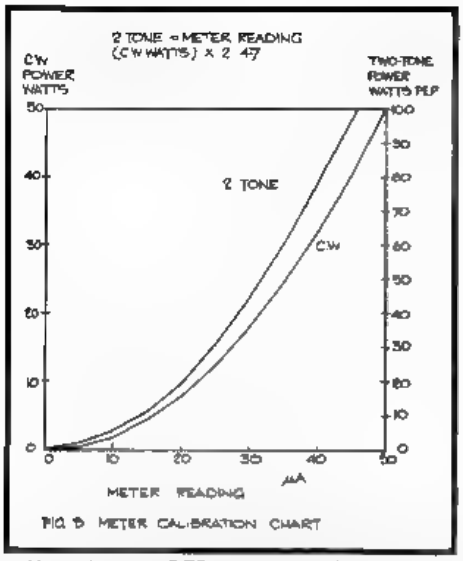


FIG 3 METER CALIBRATION CHART

Note that the PEP values so obtained are correct only for two equal amplitude tones which are not harmonically related. The value of C1 must be around 100 pF otherwise the troughs in the rectified envelope of Fig 4 will start to fill in and a larger reading will be given. ■

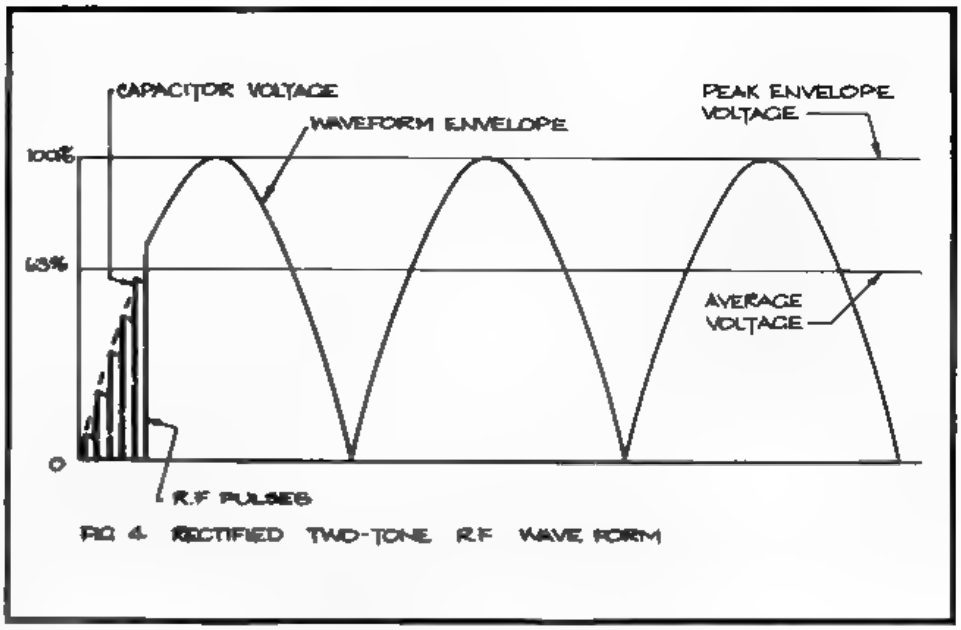


FIG. 4 RECTIFIED TWO-TONE R.F WAVE FORM

FIG. 4: The first part of the drawing shows C1 charging to the peak RF voltage and slowly discharging between rectified RF half cycles. Charging takes place over most of the first quarter cycle. Because there are thousands of RF pulses in each audio half sine the voltage actually seems to smoothly follow the waveform envelope.

NEW DESIGN

THE HELRAY PEAK POWER METER

- Totally new approach
- Acceptable to the Dept. of Communications
- First ever non-laboratory indicator for true, instantaneous peak output.
- No meters or screens to watch or interpret.
- No more guesswork
- Unambiguous over limit indication.
- Amateur — CB — Commercial Application.
- Good to over 80 MHz
- Three Ranges.-5-40W pep in 5 watt steps, 25-200W pep in 25 watt steps, 150-500W pep in 50 watts steps.
- Completely self contained.
- Calibration or checking with inbuilt DC supply
- Costs only a fraction of the oscilloscope method.
- Based on the novel system proposed by VK3AFQ.

Write or phone

GILCO

4 ELIZABETH STREET, EAST BRIGHTON, 3187
(03) 596 2414 After 6 p.m.

ONLY $62 COMPLETE

(PLUS POST & PACKAGING — WEIGHT 1 kg) W0606

RADIO COMMUNICATIONS CATALOGUE — 1982

5th ANNIVERSARY ISSUE

- RECEIVERS
- TRANSCEIVERS
- RF AMPLIFIERS
- RTTY EQUIPMENT
- SSTV EQUIPMENT
- ATV EQUIPMENT
- MONITORS
- PRINTERS
- ANTENNAS
- ROTATORS
- ELECTRONIC KITS
- COMPONENTS
- ACCESSORIES

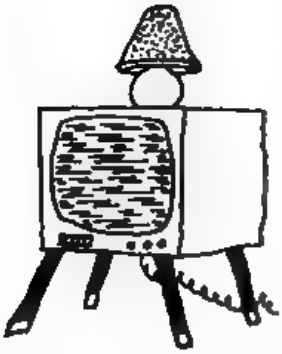
EMTRONICS

RETAIL DIVISION OF EMONA ELECTRONICS PTY LTD.

HEAD OFFICE: 23 Judge St., Randwick, NSW, 2031, Ph: 398 6378 (accounts only)
CITY & SHOWROOM: 649 George St., Sydney, NSW, 2000. Ph: (02) 211 0531
ALL MAIL TO: P.O. Box K21, Haymarket, NSW 2000. Telex: INTSY AA10101 Attn: EMOLEC

W0605

Send 50c stamp now for the New Emtronics Catalogue
P.O. Box K21, Haymarket NSW 2000



NATIONAL EMC ADVISORY SERVICE

Tony Tregale VK3QQ
38 Wattle Drive Watsonia 3087

This month's column has again been prepared by a guest writer, Hans Ruckert VK2AOU. This excellent article explains the purpose of filters and construction details for the home experimenter.

High and Low Pass Filters

Hans Ruckert VK2AOU

HIGH PASS FILTERS

There are mainly three applications for high pass filters:—

(a) To improve the selectivity of television receivers by reducing front-end overload.

(b) To reduce intermodulation products when stations are in close proximity on adjacent bands.

(c) In split filters (combination high and low pass).

TV HIGH PASS FILTERS

In the case of TV high pass filters, one needs low attenuation from 45 MHz upwards and high attenuation below 45 MHz. For frequencies below 28 MHz the average filter should display around 40 dB of attenuation. The steepness of the cut-off slope depends on the design, the components and the layout which avoids stray coupling. Figs. 1 and 3 show typical component values for two types of high pass filter. For receiver applications, small low voltage ceramic capacitors may be used. Leads should be kept as short as possible — only 10 mm of wire can have a significant effect on the overall response of the filter. Where some leads cannot be kept short, copper foil 10 mm wide may be soldered in parallel with these wires to reduce the stray inductance.

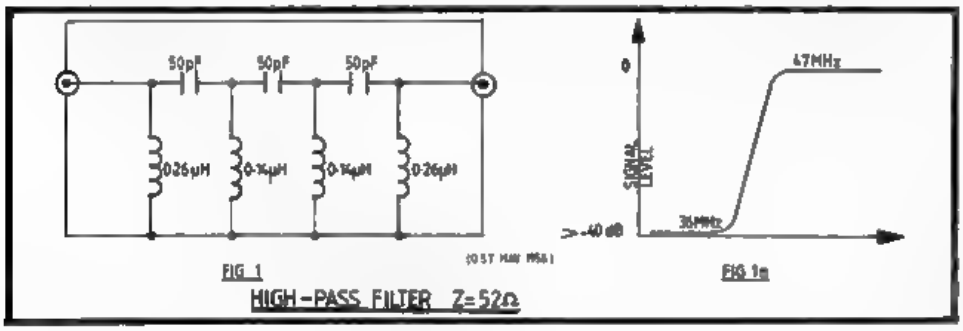


FIG 1 (QST MAY 1966) FIG 1a

HIGH-PASS FILTER Z=52Ω

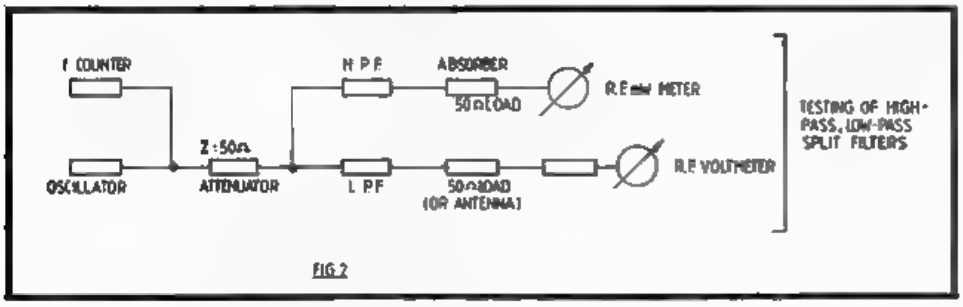


FIG 2

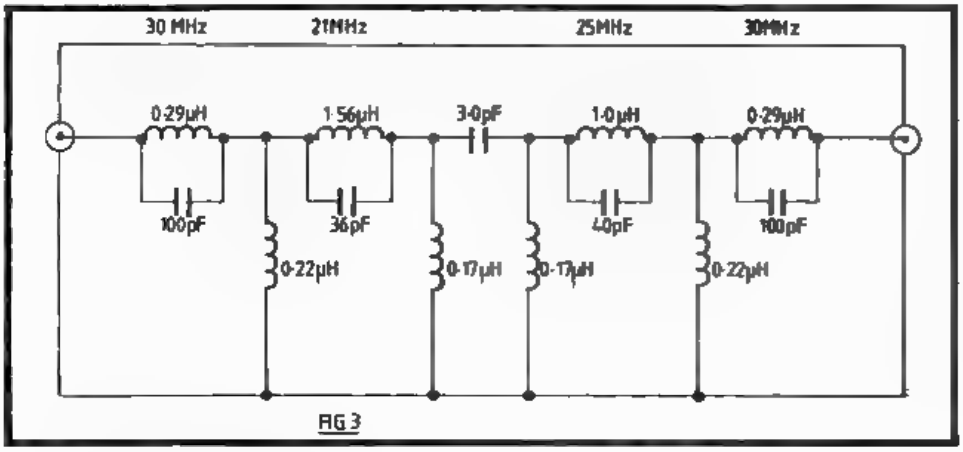


FIG 3

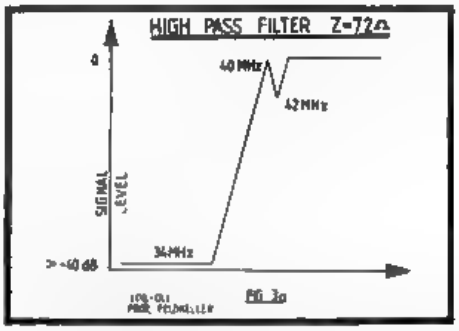


FIG 3a

The filter coils should be kept at least one coil diameter away from the shielding case, and the coil should be placed at right-angles to each other. If shielding between sections is not used then reasonable separation must be employed in order to reduce stray coupling, which would reduce the overall effectiveness of the filter. The filter and shielding can only be fully effective if the shielding is effectively earthed and if the TV chassis is also at zero RF potential.

In some television receivers we find printed circuit boards in a narrow metal frame, interconnected by long thin earth wires and going to tuner controls — these hardly deserve to be called "a chassis". This design often considerably reduces the effectiveness of high pass filters.

Response curves for the two filters are shown in Figs. 1(a) and 3(a), when measurements are taken using test circuit Fig. 2. The test circuit shows that the filter input and output terminals are connected to 50 ohm matching resistors; without these matching resistors the response curve would be incorrectly displayed. The input and output of these filters are intended to be connected to 50-70 ohm coaxial cable.

Graphics and formulae to determine component values for other filters can be found in QST May 1956 and 1966, the ARRL Handbook, also many other publications.

LOW PASS FILTERS

Low pass filters are intended to allow all in-band amateur HF signals to pass be-

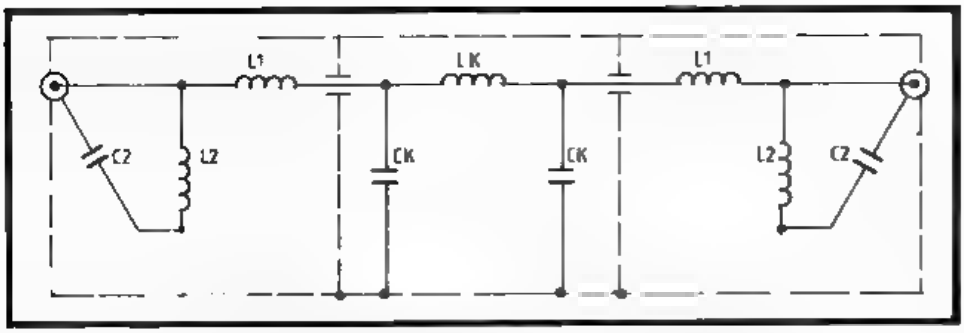
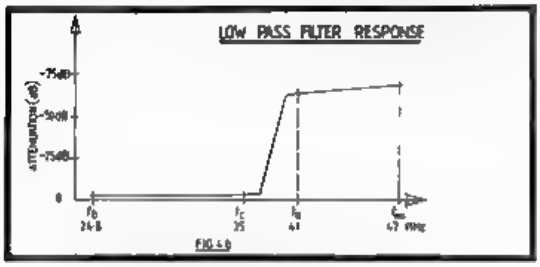
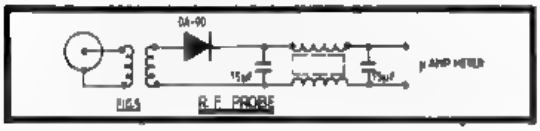


FIG. 4 (a): Low Pass Filter





$$m = \sqrt{1-\left(\frac{f_c}{f_\infty}\right)^2}\ ,\quad L_1 = m \times L_k\ ,\quad L_2 = \frac{1-m^2}{2m} \times L_k$$

$$L_k = \frac{R}{\pi \times f_c}\ ,\quad C_k = \frac{1}{\pi \times f_c \times R}\ ,\quad C_2 = \tfrac{1}{2}\, m \times C_k$$

L_k, L_1, L_2 in Henry, C in Farad, f_c, f_a, f_b, f_∞ in Hz

$$f_a = \tfrac{1}{2}(f_c + f_\infty)\ ,\quad f_\infty = 2f_a - f_c\ ,\quad f_b = \sqrt{\frac{25330}{L_k \times \tfrac{1}{2} C_k}}$$

FIGURE 6

LOW PASS FILTER (CIRCUIT AS IN FIG 4a)
SAMPLE RESULTS FILTER COMPONENTS & FREQUENCIES

	CASE 1	CASE 2	
f_c MHz	32	35	
f_∞ MHz	45	47	
M	0·7	0·667	
R Ω	52	52	
LK µH	0·517	0·473	
L1 µH	0·36	0·315	
L2 µH	0·188	0·197	
CK pF	191	175	
C2 pF	67	58·3	
f_a MHz	38·5	41	
f_b MHz	22·7	24·8	
MHz WITH L1	26·5	27·8	18mm LONG 7 TURNS 12mm I.D.
100pF L2	37	36	19mm LONG 7 TURNS 9mm I.D.
PARALLEL LK	22	23	24mm LONG 11 TURNS 12mm I.D.
FOR COIL ADJUSTMENT WITH	GDO		18mm Cu WIRE

tween the transmitter and the antenna with the minimum of attenuation. Higher frequencies, which may contain transmitter harmonics, will be attenuated. The filter described offers about 60 dB of attenuation for frequencies above 41 MHz, but very little attenuation for frequencies below 33 MHz (coils do not get warm). Old-timers will remember that the writer described this filter in detail in AR November 1955.

The selected cut-off frequency was 35 MHz. Substantial attenuation can be expected from 41 MHz upwards, but it depends mainly on keeping the self resonance (inductance) of the capacitors out of the designed attenuation range to avoid holes in the frequency rejection band — those spots where transmitter harmonics may show up.

Some commercial filters have been very disappointing in this regard. Fig. 4(a) shows the filter circuit and indicates the shielding positions. Fig. 4(b) represents the expected response curve. The formulae table shows the frequencies and component values for two filters. The coils can be adjusted by placing an accurate 100 pF capacitor in parallel with the coils and checking the resonant frequency of each coil with a GDO. Depending on lead lengths, coils may be ± one turn. The filter must have coaxial fittings and should be placed as close to the transmitter as possible. The ceramic capacitors should be of the NPO temperature coefficient type and should be able to stand at least 200 volts of RF energy

Perhaps we should remember that any filter when fitted to the transmitter cures the problem — means the transmitter is at fault. AND any filter which, when fitted to the TV receiver cures the problem, means that the television receiver is at fault. ■

EMC

(Electro Magnetic Compatibility)

If radio frequency interference is causing you a problem you are reminded that — "Advice on all types and aspects of interference (PLI, TVI, AFI, etc.) is available from the National EMC Advisory Service".

FORWARD DETAILS TO
VK3QQ,
Federal EMC Co-ordinator, QTHR.

HOW'S DX

Ken J McLachlan VK3AH
PO Box 39, Moorooibark 3138

With the quiet, unceremoniously announced sharp increase in the cost of postage, which was in the order of 25 per cent to foreign countries recently, one has to think twice about sending a QSL card via the direct route Possibly the work by the volunteers that man the QSL Bureaux in this country is going to be dramatically increased and the unjurged labour which allows them to function is going to be stretched to the limits

Whether you are a seasoned user of the service or a newcomer YOU CAN ASSIST by enquiring from them as to their requirements and abiding by their wishes so that their arduous task is made just that little easier

WIA members enjoy a first class service which is equal to any in the world and the cards DO reach their intended destination even though some will say it takes a long time Sure it does take longer than via the direct route but if you QSL 100 per cent and weigh up the cost of the number of QSOs that you will QSL each year (include postage envelopes and return payment whether it is IRCs or greenies") the savings that you have made will be quite staggering even after if you must have subtracted membership fees, then you receive all the other benefits that the Institute provides as a bonus.

DXer, "Ragchewer", Experimenter or SWL the Institute since its inception has achieved in collaboration with similar Societies throughout the world most of the privileges that you now enjoy and have probably accepted as a way of life but it needs support by having a majority membership of licences so that we may retain these standards and update them in step with technological advancements in this, the 20th century

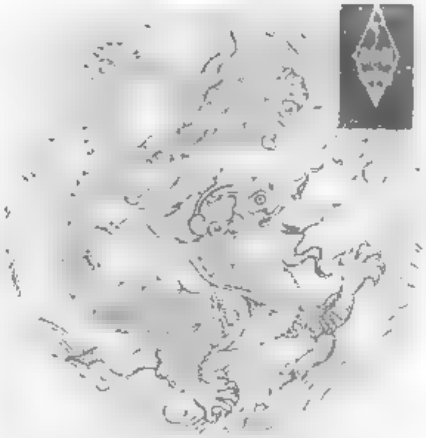
CONGRATS

We known DXer John VK6AJW, according to my reading of cq-DL, has won the Ocean a section of the 1981 WAEDC (European DX Contest) with a score of 235,872 points Well done, John, and nice to know VK shared some of the honours

LAST CHANCE

Anyone who has worked A6XF, A6XR, A6XT, MP4TEE and P29LS and is still awaiting a card or would desire one have until the 31st December, 1982, to request confirmation as Tom G3CHP is going to destroy the logs. Tom, that is sacrilege.

Two multi-coloured cards direct from CRSA



BY1PK

BY QSLs

Quick turn around QSLs from BY1PK are being received by the operators who have had the patience to track, QSO and log this illusive station and follow the operators' instructions with regard to QSLing. The card, as you saw on page 26 of AR last month, is an extremely well designed multi-coloured card which any amateur would be proud to exhibit and contrary to discussions heard around the bands from QSO to receipt of the card plus being sent on to this QTH was in the order of three weeks. The correct address for the diligent is Amateur Radio Station BY1PK, Chinese Radio Sports Association, PO Box 6106, Beijing, Peoples Republic of China

This PO Box is going to be overworked because of the activity from the legitimate station and the "CLOWNS" who are signing the same call sign. QSL the lot (one VK worked three different BY1PK's and is hoping that the genuine will QSL promptly). It is hoped that they have not got to go to the trouble and expense of replying with the phrase "Not in the log OM" too often as the true spirit of amateur radio will be impaired.

MELLISH REEF

VK9ZR Mellish Reef was reactivated in early May and proved it is still a much wanted country, as the group had knocked over some 12,000 contacts by the end of the third day of operation

In a short QSO with Harry VK2BJL, one got the impression that they were very tired but had a smooth trip out to the Reef, however they were very disillusioned by the sight of many dead birds and much of the vegetation that was "flattened" apparently by a cyclone that had gone through that area just prior to their arrival.

Harry's thoughts were that it would take many years for it to get back into the shape he remembered from the previous visit. Harry wishes the QSL information for those requiring a card to be passed on to the readers of this column.

The QSL QTH for ALL VK9ZR contacts, including the stint at Willis Island on the return trip, is: Mr. H. Meade VK2BJL, PO Box 85, Round Corner 2158 NSW.

NEW CALL SIGN

Yet another station that everyone will be clamouring to work will be 4U1VIC.

Will it be a new country? Will it be the country that is to replace VS9K as number 319? The multitude on the bands will make up their own minds before the operation starts so to help you here are the facts.

The Vienna International Amateur Club, whose members are amateurs working with the various UN agencies headquartered in Vienna, has received permission to operate an amateur station with the special call 4U1VIC Unfortunately, no location has been given for the transmitter which could be the key for the decision makers.

Hear them first, then WORK them and QSL to VIRC, PO Box 200, A - 1400, Vienna, Austria. They hope to be on the bands within a few weeks. Good luck and good operating should bring results.

QSLs

Do you worry about ALL those QSLs you have to process? Well think of the staff at the DARC QSL Bureau as they handled some 7,000,000 cards in 1981, that is in the order of some 32,000 per working day. Quite an effort really, and how many trees were used to make up that amount of pasteboard?

FIFTY YEARS

Trinidad and Tobago is celebrating 50 years of amateur radio, hence the 6Y50 prefix used by participating operators. This prefix will be available for the rest of the year

Another new prefix which is much sought after is 4D and it has been issued by the Philippine authorities to celebrate the 50th year of PARA (Philippines Amateur Radio Association)

PREFIX CHANGE

It is getting harder and harder to catch up with some administrative ideas and the changing of prefixes. The latest would probably be Bahrain, who have deleated the "X" and replaced it with the figure 2. So now one has to look for A92 instead of the familiar A9X. The suffixes will remain the same way by all accounts on last reports.

SPECIAL PREFIX

RX7 is a special prefix being used to celebrate the Kazakh Republic's 250th alliance in the USSR All cards via Box 88, Moscow, for the special card that will be sent.

5H3AP

If you have worked 5H3AP since August 1977 and are still awaiting a card your worries are over as you will not be receiving one. The rightful owner of the call left Tanzania at that time, returning to the States to enjoy his retirement, but someone has and is still illegally using the call

TOP BAND

RADIO COMMUNICATION has given Mike VK6HD's operating habits on 160 metres in a recent issue (hope this opens up new horizons, Mike) and they also mention that amateurs in Region 1 are no longer permitted the use of 1 800 to 1 810 MHz and in due course 1 830 to 1 850 MHz will be exclusive to the amateur service JA amateurs will be using 1.810 to 1 825 MHz shortly, presently being allowed 1.907.5-1 912.5 MHz.

SM operators have been allocated 1.830-1.845 MHz for CW operation. Power output 10W maximum.

ACTIVITY

Listen for activity from UA1PAM on 20m SSB and CW, 5R8AL on 15m SSB, JA1DNG/YI on 15m SSB and CW and ZD9BV (QSLs arriving promptly in VK courtesy W4FRU) 10, 15 and 20m at odd times, and will be joined by other calls ZD9BW and ZD9YL probably late July or early August.

ITU VK6 STYLE

Being able to use the special suffix ITU like a number of other countries do on ITU, Communications Day became quite a challenge to some keen VK6 DXers. The call VK6ITU was secured with the co-operation of DOC for the appropriate day (17th May) and it was shared by both Novice and Full privileged licensees alike, however the propagation was not kind and only some 500 stations were logged on 40 through 10 metres for the 24 hour period

RETIRING

Well known Net Controller, Percy VK3PA, "retired" on the last Friday of June after some ten years as being the anchor-man of the International Pacific DX Net

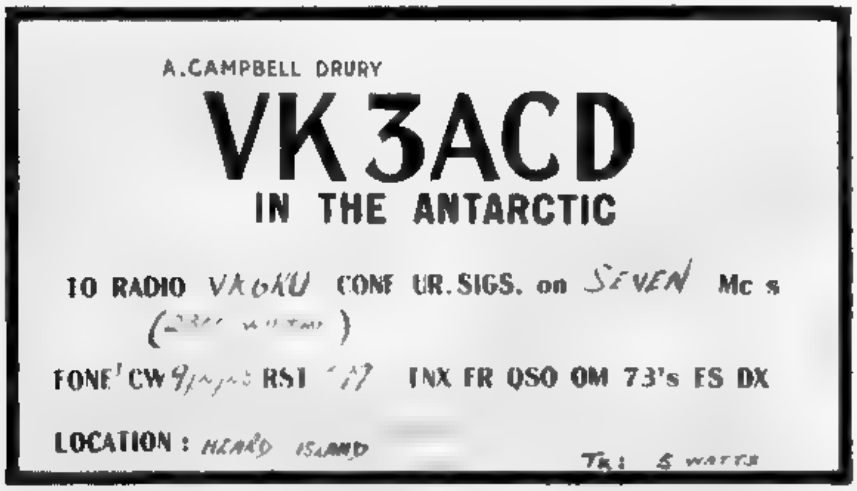
Percy feels that it is time he donated more effort to his already beautiful flower and vegetable garden, and the good wishes from all DXers, particularly those that have enjoyed many happy hours in participation with the net over the years, trust that NOW they will be able to have an unhurried QRM free QSO away from net frequencies with Percy

Thank you, Percy, for your diligent, courteous and sustained contribution to the fascinating facet of the hobby that we all so much enjoy and I am looking forward to a quiet chat and a card to confirm the QSO.

THANKS

Sincere thanks to those who have made these notes possible, including magazines such as cq-DL, World Radio, Radio Communications, QST, Geoff Watts' Newsheet, Jan and Jay O'Brien's DX Managers List and others that may have been inadvertently missed, also amateurs, including G3NBC, F6CYL, ZL1AMM, VKs 3UX, 3XB, 3YL, 3DFD, 3DKK, 4AIF, 6IH, 6HD, 6NE and SWL Eric L30042.

Heard Island Update


A.CAMPBELL DRURY

VK3ACD

IN THE ANTARCTIC

TO RADIO VK6RU CONF UR.SIGS. on SEVEN Mc s

FONE/CW RST TNX FR QSO OM 73's ES DX

LOCATION : HEARD ISLAND

The original card VK6RU received from VK3ACD now VK3CD which is believed to be the first confirmation received by an amateur from Heard Island.

Nick VK6XI has forwarded the following information on the DX Chasers' Club's project of letting Heard Island be heard.

The NSW Corporate Affairs Commission have approved the submission and registration of the HEARD ISLAND EXPEDITION Accounting procedures and guidelines have been established, and due to the amounts of money involved and the necessity for contracts, it is believed that it is a fundamental requisite to use the professional skills of a chartered accountant to manage and advise on financial affairs. This expedition will not be a weekend excursion to some offshore island in a row boat. Extensive planning with no short cuts taken will continue to be the normal procedure for this event.

The unique call sign VK0HI has been reserved, and when used should provide a very desirable addition to many operators list of countries worked. Heard Island has now reached the top of the most wanted countries list with the operation of BY1PK, and now DF8MP/XZ operating out of Rangoon, who is believed to be genuine. For the amateurs' side of the expedition international assistance has been sought. We have received great encouragement by a number of overseas DX Clubs pledging support.

Over the years various amateur operations have taken place on the island, but only the very fortunate have a QSL card confirming a contact and the forthcoming expedition is to be set up at Atlas Cove, which is the site of the ANARE station on the island. It provides the best landing beach, which will be ice free during the expedition's stay.

The mountaineers of the group intend to climb Mawson Peak, which is part of Big Ben and it is intended to set up a camp on the summit plateau to carry out an examination and testing of the reported rumblings emanating from Big Ben. Amateur radio operations will be an integral part providing not only world-wide amateur contacts but assurance for the expeditioners of the fact that the world is ready to help them.

DX Heard and Worked

SSB WORKED ON THE WEST COAST
10: 3X3JA, 4KIA, 9J2TY, CP6EL, D68AAB, FO6HL, J3AH, OH1TD/4U, T30OB, VK9ZR, VP2VD
15: 4U7ITL, CR9AK, CT3BM, FB8WG, JY9RC, SV5FD, VK9ZR, ZL4OY/A.
20: 7Q7LW, 8P6PS(YL), BV2B, CN8CY, CO7AM, D68AAB, FP8HL, FY7YM, HH5CB, KC6BS, VE3LRU/6Y5 (YL), VK9ZR, VP2KK, ZD9BV, ZF1SB, ZK1YL (YL),
40: 4S7WP, 8Q7BN, FM7WS

CW WORKED ON THE WEST COAST
1.8: KH6AT/KH6.
21. BY1PK, DJ6SI/5V
3.5: 9U5WR, DJ6SI/5V, GI3IVJ, KG6RT, KL7Y, VK9ZR (WILLIS), ZK1AF
7: 4S7XSG, 8P6KY, J20/Z, J73D, OJ0AM, ZF2CD, ZK1AF

CW HEARD ON THE WEST COAST
1.8: RA9AKM, UK2RDX, UP2NK.
3.5: DJ6SI/6W8, FG7AM, KV4CI, VK0AN, YV1NX
7: DJ6SI/5V, SU2DX

CALL SIGNS HEARD AND WORKED ON EAST COAST
10/CW: VE5AAJ, VE5XU.
10/SSB: VK9ZR
14/CW: RK7JAA
14/SSB: 4K1A, 5T5ZR, 8D5UF, 6W8AR, 6W8DY, 8Q7BN, 9M8PW, AH2L, AM6MQ/PM, BV1B, CN8MC, DL2VK/ST3, DX1F, EP2TY, FB8WG, GI3WFA, H44WB, HB0LL, HH5CB, HI3PGJ, OX3ZM, OY5NS, SV1MO, UC2LBE, UD6DJH, UG6GAT, UG6LQ, UH8HCB, UO5OCL, UP2NK, VC3GCO, VP2KK, WB0NKR/KH3, ZF1SB, ZK1CG, ZK1XP
15/SSB: DL2VK/ST3, EA8JE, M1C, UJ8JCT
21/CW: RK7GAA, TG9NX, ZF2CD
21/SSB: 4Z4AB, T3ZDB, V9ADX.
28/CW. CK1CC
28/SSB: CT3BM, V9ADX

CW SWLing WITH ERIC L30042
10: FR7BP, IS0XKV, VK9ZR (WILLIS), VQ9CM, YB4GF, YC0BRT, ZC4YC, ZS6BTG
15: 9H1CH, BY1PK, FK8EB, FR7BP, HL0B, UK8AAI, VK9ZR, W1DV/DL2, ZK1CO, ZL4PO/C, ZS1QJ
20: 3B6DB, 8P6BX, AM07TH, CT2AO, DU1OR, EA6BH, FK0AF, FM7WO, FO8FW, HH2VP, HK3HY, HL0CAC, HP1XRR, KP2H, PY1HQ, T32AF, TI2BEV, VP8ANT, VP9LA, VQ9CW, VS7EY, VU2VZ, YB5AES, ZK1AF, ZK2VU
30: 3X6DX, DJ8NY/M, DL3GG/YV5, DL7AEA/EA6, F6GT, GB3RN, GD4BEG, GI3AEG, GW4DGD, HB9NL, JA4CJU, JA5ANP, OK1OWF/P, OZ9XD, VK9NS, VP8ANT, ZC4DT/G, ZK2VU

In 20 weeks Eric has heard over 400 CW stations in 32 countries on 30m

40: AH2L, AM01BAD, CX7BY, DJ5VQ, EX5UWO, F6ANF, FB8YJ, FK8DY, FR0GGL, GI3IVJ, GW3AX, HB9BQL, HH2VP, HI3PC, HK1MY, KV4CI, OK3CAQ, OZ7YY, SM6EHY, T30AT, UK8LCB, VK9ZR, VQ9CW, Y55XL, YO2CE, ZB2EO, ZK2VU
80: GI3IVJ, OK4NH/MM, YU2CAO

QSLers FOR THE MONTH
3B8CF, A4XJP, DJ0LC/HB0, EA9HG, F0AHY/FC, FG0CXV/FS7, FM7AV, FO0NP, FR7BX, GB2FAA, HB9IK (10 MHz), K8MFO/C6A, LU6BBM, OH3VV/CT3, PY8EUV, SV0AU, TF3JO, VK8HA (10 MHz), VK9YC, VP8ANT, VP9CB, W2LPF/DU2, YJ8TT, ZB2EO, ZS4XR.

QSL ROUTES AND MANAGERS
4S7AJG (K9AJ), 4Z4AB (K3STM), AH2L (W4PKM), EA6BH (DL7FT), RK7GAA (UK7GAA), RK7JAA (UK7JAA), TG9NX (N4FKZ), TI2BEV (W4ZD), VK9ZR (VK2BJL), VQ9CW (WB1DQC), W1DV/DY2 (WA2RKX), YB5AES (W4BBP), ZF2CD (W3ODJ), ZK1AF (SM3CXS), ZK2VU (DL1VU)
NOTE: Managers shown in brackets

QTHs YOU MAY NEED
EX5UWO — PO Box 88, Moscow, USSR
FK8EB — PO Box 3079, Noumea, New Caledonia.
FO8FW — PO Box 5006, Papeete, Tahiti
VP8ANT — PO Box 146, Cambridge, Great Britain
VP9JY — PO Box 788, Hamilton, New Zealand.
YB4GF — PO Box 273, Palembang, Indonesia. ■

Anti-Repeater for the Kyokuto FM-2016A

B. Wills VK4ABY
Kent Street, Forest Hill 4342

The Kyokukto FM-2016A has four memories which may be scanned, but does not have an instantaneous means of switching to a repeater input, unless the input frequency is held in one of the memories. This article describes how the set may be modified to enable quick selection of "anti-repeater".

THE SCHEME

The set has a front panel RF attenuator/tone switch which is disabled and used to switch the crystal oscillators to the opposite function during receive (or transmit). No changes to the case or panels are necessary.

PROCEDURE

Remove case halves and disconnect one end of the bypass capacitor from the power switch to earth. Removal of the four countersunk screws will allow the front to be tilted for easier access.

Disconnect the orange/white wire from Synthesiser Board pin P5 and from the RF Atten./Tone switch. Remove the black wire, on the same section of the switch, going to earth near the bypass capacitor mentioned above. Remove the red/white wire which runs from the other section of the switch to the MAIN UNIT pin P46 (near relay). Disconnect the white wire from the Synthesiser Board pin P22 to the common pole on the Tone side of the switch. The second white wire soldered to the switch at this point is also disconnected from the switch and this end is soldered to pin P22.

The switch should now look as shown in Fig. 1 and is now ready for its new job. Fig. 2 shows part of the original circuit for the Mode switch and the position of the two wires which are to be cut.

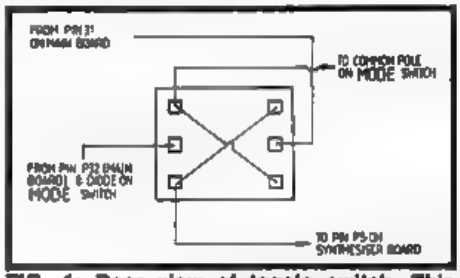


FIG. 1: Rear view of toggle switch. This shows the new wiring.

With the switch toggle up, normal operation occurs. Toggle down gives anti-repeater if the MODE switch selects the correct offset (+0.6 MHz or —0.6 MHz) for that repeater.

WARNING

Take care not to knock the switch into the OFF position — the scanner will work all day but nothing will be heard. ■

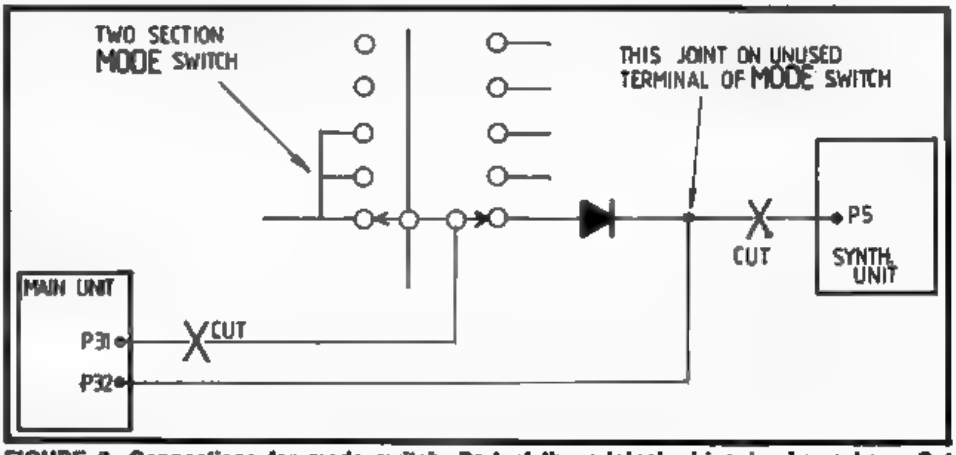


FIGURE 2: Connections for mode switch. Part of the original wiring is shown here. Cut the two wires as shown.

WARNING!!

Disposing of your old rig??

Please ensure it goes ONLY to someone licensed to use it on YOUR bands.

A Trip to the Antarctic with VK0SJ

Arthur Smith VK3UX
5 Rushall Street, Fairfield 3078

Sjoerd Jongens VK0SJ, known world-wide as "SOJO", was never very interested in amateur radio but after spending some time in the Antarctic he now has a very strong fascination for it.

INTRODUCTION TO AMATEUR RADIO

As fellow expeditioners on a trip to the Antarctic were going to sit for the amateur operators' examination prior to departure, Sojo thought he would not be left out and, as he is an electronics engineer, he did not find the examination too difficult. So a last minute purchase was an Icom IC-701 to make the trip with him aboard the "Nella-Dan" en route to Mawson Base.

INSTALLATION

At first Sojo did not have too many contacts except for an occasional call from Dave VK0DB on Macquarie Island, so it was decided to install Keith VK0KL's IC-701 in the shack with the base station's Collins equipment and use the station's "VEE" transmit aerial and the Rhombic receive aerials, when they were not being used by the Australian National Antarctic Research Expedition's (ANARE) station, VLV

Unfortunately it was soon discovered that this was not a good location as the transmitter caused interference to some of the scientific equipment and also to the cassette players in the sleeping quarters. This caused limited operating time so Sojo decided to install his IC-701 in an empty laboratory with a 200 metre long wire aerial strung between two existing masts in a north-south direction. This gave good reports from Australia and apparently no interference problems as the complaints ceased.

THE GREAT ALTERNATIVE

Amateur radio proved a great alternative to the radio-phone skeds that the Antarctic has via Sydney; these skeds are about half an hour duration with each of the four Antarctic bases time allocated sequentially. So with the time available to those who wish to make a call and with added complications such as atmospheric disturbances and polar cap absorption, when conditions are "difficult", time is sometimes at a premium and there is also a cost problem. Whereas an average amateur contact is timeless and Kevin VK0KC has been known to have broken the 3-hour record.

At first Sojo's main interest was to contact a station in his home country, PA-land, but he soon discovered it was very tricky to find the right frequency-band and time of day. But, due to the low noise level in the Antarctic and the availability of long aerials, he very rapidly found he was a very popular station and the log book had many stations entered from all areas of the world, and a few contacts were made to stations using a 10W transmitter with a vertical whip aerial

INTRODUCING TELEX

Most of Sojo's enthusiasm was generated by Julian ZS1ANT, an operator with the South African Antarctic station, who in turn introduced him to his friends in South Africa, Alastair ZS5MU and his wife Davina ZS5GC, who very soon became very good "friends-on-the-air" to Sojo also.

Davina and Alastair inspired Sojo to construct a PLL demodulator and borrow a telex machine from the main base station which then enabled contacts in written word.

PORTABLE DX

In November 1980 on an overland trip with three others towards Scullins Monolith, using two dog sledges, Sojo decided to take his transceiver. Two Bombadeer skidoo batteries were taken, one to use with the regular radio for skeds with Mawsons and the other for the Icom. However, during the trip over very rough terrain one sled tipped over spilling much of the acid which, when used for transmitting, gave very poor results.

At the turn-around point of the trip Sojo topped this battery up with some melt-water and placed both batteries in a bucket of hot melt-water, jumpered the two batteries in parallel and had very satisfactory results, working Davina for over 45 minutes.

Mawson Base

Next, on a trip in January 1981 with tractor trains, Sojo wrapped a 20 metre open dipole around an 8 metre long bamboo attached to the radar van sledge. This time Sojo used the 240 volt generator, which ran day and night, and was even able to make some contacts whilst on the move, although static electricity caused by the sledges moving over the snow did make readability of weaker signals difficult, most contacts being made whilst stationary

On this trip Sojo also installed the telex and used it to transmit radio telegrams on 80 metres to VLV at Mawson for re-transmission to Australia.

FURTHER DIVERSIONS

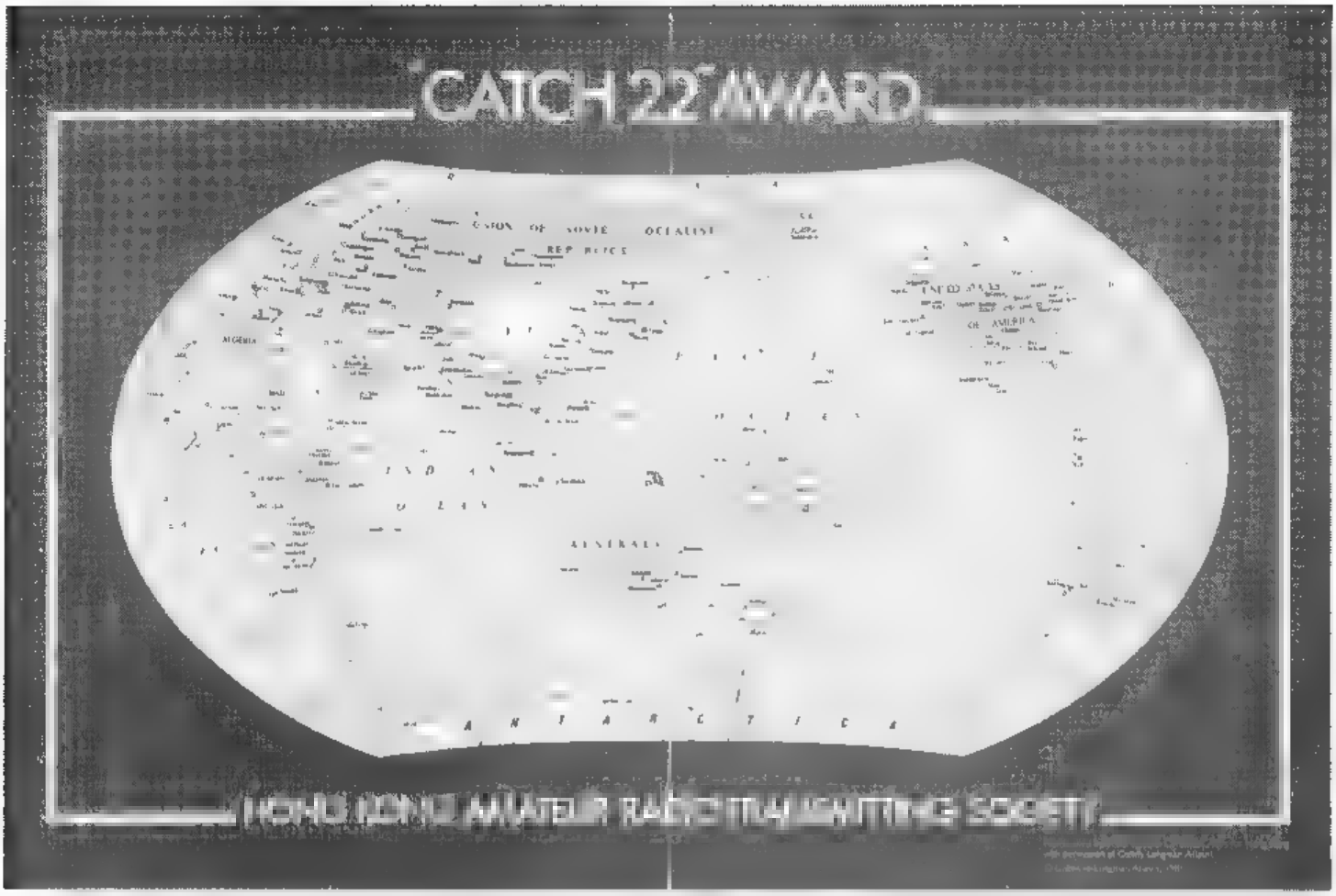
In the summer time Sojo was so enthused with amateur radio that he had a Tono Theta 7000e communications computer sent down so he could further diversify in this new hobby. This enabled him to transmit and receive RTTY, ASCII and CW on a video screen. Most contacts via this medium proved extremely good and Sojo was even able to copy HS1AMI (now HS1AMI/Z21) sending CW with h a home-brew computer using 1 watt. This power level being necessary because of QRM.

NO REGRETS

After one year in the Antarctic with some 1,984 entries in his log book and many friends the world over, Sojo has no regrets to becoming involved with amateur radio as it gave him a very satisfying hobby under rare conditions in a secluded place during his year at Mawson, although the QSL cards and letters he received on his return may have made him think twice ■

Tractor trains consist of a bulldozer pulling sledges loaded with scientific equipment and personal needs for excursions which sometimes last up to four months.

*Antarctic Division photography by M Betts and L. Macey



AWARDS

Mike Bazeley VK6HD
8 James Road, Kalamunda WA 6076

This month we venture a little further afield and detail some awards from outside the Pacific region

THE OTTAWA AMATEUR RADIO CLUB'S NATIONAL CAPITAL AWARD

The National Capital Award is issued upon proof of contact with stations located in the National Capital Region of Canada. The award is issued to SWLs on a 'heard' basis. The National Capital Region consists of the Cities of Ottawa (Ontario), Hull (Quebec) and the surrounding area.

Stations located in Canada and the lower 48 United States require 20 contacts, whilst all others require 10 contacts.

The attractive certificate will be endorsed for band or mode upon request. Fee for the award is $3 (or 8 IRCs) overseas. Do not send QSL cards. Send list of contacts giving call sign and QTH of station worked, date, band and mode to: Award Manager, Ottawa Amateur Radio Club, PO Box 8873, Ottawa, Ontario K1G 3J2, Canada

MARY ROSE AWARD

The "Mary Rose" Award is available from the Secretary, Marconi Radio and Electronics, Society, Central QA Records, Browns Lane, The Airport, Portsmouth, PO3 5PH, England. This award is to commemorate the raising of the "Mary Rose" which sank in the Solent in 1545. A special event station will be active (GB2MAR) in May and October, 1982, on 14.250 MHz.

To claim the "Mary Rose" Award

1. Submit proof of contact with 25 Hampshire stations each counting as one point.
2. Submit proof of contact with 20 Hampshire stations and the Marconi Club station counting 5 points.
3. Contact on one Mode, one Band, or Mixed Mode/Band
4. Confirmation by Check List from log only. Verified by suitable club or two licensed amateurs.
5. NO QSLs required.
6. Award costing 10 IRC for outside UK. Award costing 5 IRC for UK only.
7. Award available to SWL and transmitting amateurs.
8. Special event stations also 5 points.

Description of the "Mary Rose" Award

1. The award to consist of a certificate approx. 12 in. x 10 in. having a basic background of the "Mary Rose" as in 1545 Print of Kings Ships.
2. This background to be surrounded by a border of suitable pattern as to not detract from the age of the original print.
3. The border to include the Tudor Rose of the period in the top left hand corner and the address of the Trust at the Civic Centre, Portsmouth, in suitable script to balance period.
4. The coat of arms of the City of Portsmouth in the upper right corner.
5. Between the ship's powder list and the water line, the inscription:—

   Awarded to .. ..
   in recognition of his/her excellent achievement in Mode
   date

   Issuing Officer

(Details of this award are printed as received!)

CATCH 22 AWARD

A black and white photograph of the "Catch 22" award does not do full justice to this award. The certificate has a central multi-coloured map of the world surrounded by a dark green border with a textured appearance. This award is for those with plenty of wall space as it measures 480 mm by 300 mm. Details of this award, issued by HARTS, appeared in May 1982 AR

Very many thanks to those of you who responded to my request for a SASE when applying for awards or information. I can assure everyone that the time saved, this end, is appreciated.

73 DX and Happy Hunting, Mike VK6HD ■

EDUCATION NOTES

Brenda Edmonds VK3KT
56 Baden Powell Drive, Frankston 3199

EXAMINATION STATISTICS

I have recently received from DOC some statistics for the August 1981, November 1981 and February 1982 exams. Figures given are numbers of applications received for each section, numbers of candidates sitting for each section and numbers of candidates passing each section for each State and for the whole of Australia. The tables are too long to publish here, but if anyone is interested in seeing them, copies can be obtained from me or from Divisional Federal Councillors or the Executive Office.

There are no surprises in the overall figures. Pass rates are highest for Regulations and CW sending and usually lowest for Theory at either level. It is interesting to see that the numbers sitting for the AOCP are now higher than for the Novice exam. Over 2,000 candidates sat in August and February combined, of whom over 40 per cent passed. What we do not know, of course, is the number making a second or later attempt, but a growth rate of 800 plus from these two exams is surely healthy.

Theory pass rates for both levels appear to be slowly rising — over 40 per cent overall for each exam, and most States with over 50 per cent at one or other of the exams. I would like to think that this figure reflects better preparation by the candidate, but I tend to agree with the DOC officials who see it as related to the fact that the multi-choice exams have now been around long enough for the format and type of question to become fairly well known — especially to those sitting for a second or third time.

The most unexpected feature of these figures is the consistently poor performance of the VK2 examinees, who show the lowest pass rate in almost every exam, e.g., Regulations (August) — Australian average pass rate 70.9 per cent; VK2, 44.8 per cent. Novice CW sending (February) — Australian average 76.8 per cent; VK2, 32.1 per cent.

This is surprising in view of the very active group of educators in VK2. Does VK2 have more students trying to get through on their own than in the other States? Or are they more inclined to "have a go at it" even if not expecting to pass? I would welcome comments from people who have been involved in these latest exams — either as candidates or teachers.

Several recent comments have been made on the need for a review of the Novice syllabus. I would be interested to hear from anyone who has views on this subject, or who would like to give serious thought to any particular section. I can be reached QTHR in the Call Book and the Melbourne telephone book. I am also trying to develop an Education Net on Wednesday evenings at 1200 UTC on about 3.685 MHz. Please feel free to join in if you are able or interested.

I hope to have another trial AOCP exam paper ready early in July. It will be available from the Executive Office or from me on request.

73, Brenda VK3KT. ■

ALARA

AUSTRALIAN LADIES' AMATEUR ASSOCIATION

Margaret Loft VK3DML
28 Lawrence Street, Castlemaine 3450

HOME AGAIN

Well our two weeks holiday went too quickly for us and it is back to cold windy weather again, still we are in winter. While in Eden we visited Col VK2ASF and Jean. We only had 2 metres with us and talked to a few OMs in Gippsland and on the south coast of VK2.

HOLIDAY TIME

Diane VK6KYL was on holiday in the eastern States and on Lord Howe Island in May and talked to quite a few of the YLs from LHI. They enjoyed the trip and are hoping to return again. Geraldine VK2NQI played hostess to Diane, Bill and girls whilst they were in the Sydney area.

Geraldine, do hope you enjoyed your holiday in VK4-land, also others who have been away.

CALLING FOR NEW MEMBERS

Valda reported no new members for ALARA this month whilst on air on Monday night. The new address for Valda is PO Box 4, Brighton. So if you are interested in joining ALARA or are a teaspoon collector please write to Valda and she will be happy to supply you with details.

PLEASANT SUNDAY AFTERNOON

Jenny VK5ANW was in Melbourne in May for the Federal Convention, and on the Sunday afternoon a group of girls met at Valda's QTH to meet Jenny. I was invited but could not make it. Mavis VK3KS, Jessie VK3VAN were among the group, also OMs Gordon VK3BGB and Ivor VK3XB attended.

ANNUAL MEETING

The Annual Meeting of ALARA will be held on air on Monday, 26th July, so please mark this date on your calendar, girls, and come on frequency to ensure its success. Remember it is your Association and this will be your chance to have a say in the successful continuation of ALARA in the future. It is seven years since the forming of ALARA, or LARA as it was then, and from a handful of members it has grown to a membership of over 100.

REMINDER

Remember the date for ALARA's contest is November 13th from 0001 to 2359 UTC, all bands may be used. Full details of scoring, rules, etc., will be in the contest section of AR and associated magazines.

33/73/88 for this month.

Margaret VK3DML. ■

DEFINITION OF:

- Success is getting up just one more time than you fell down.

LISTENING AROUND

Joe Baker VK2BJX
Box 2121, Mildura, Vic 3500

During December 1981 Joe spent a very pleasant vacation in Melbourne as the guest of Don VK3VPW and Don's charming XYL, Uter.

While in Melbourne Don VK3VPW suggested that we visit Radio Lyndhurst. So armed with my camera I piled myself into Don's car and we headed for the bushland area where the installation is located.

INSPECTION FROM APAR

Not knowing whether or not we would be permitted to inspect the station at close range, we decided to first drive around the long roads on the perimeter of the antenna farm and be satisfied with looking at all those aerials at a considerable distance. So at long range I took what photos I could get when Don stopped his car, even though I do not have a telephoto lens. The roads in the area are to say the least rather tortuous and pretty dusty and there is much scrub, so I was happy that there were no bushfires, for to me this seemed to be an area where anyone who was careless as to where he tossed his cigarette butts could cause quite a conflagration. But apart from getting bitten on my posterior by a very large and hungry soldier ant, as I paused to take one photo, nothing very spectacular happened.

Radio Lyndhurst

WE ARE ADMITTED

After cruising around the area for a while, we came to what was obviously the entrance gate to Radio Lyndhurst. Here we paused, and I said to Don "I wonder will they let us have a look inside?" Don said, "Well, you go up to that main door and if they say 'yes', give me a signal and I'll drive the car into that parking area." So I went up to the door, pressed a button on the wall nearby and along came a white-coated technician to whom I addressed myself. I told him that both Don and I were amateur radio operators, and that we had been admiring their aerials, and could we have a look inside the transmitter building. The technician said that he also was an amateur, that almost all of the staff were also amateur operators, and invited me to have a word with the Officer-in-Charge, Ken Bytheway. Ken said that there would be no problems, providing that we signed the visitors' book "to indemnify us against the possibility that either of you might get roasted if you get too close to any of the transmitters". Thus encouraged, I signalled to Don to park his car, and Ken detailed the white-coated technician to give us a grand tour of the place.

GRAND TOUR

In writing this article, I cannot possibly tell you all that we were told about the Radio Lyndhurst installation, because I didn't take notes at the time, or have a tape recorder with me. However, I told the two that we met that I'd probably be writing an article on our visit for AR and they were very helpful. Before I go on, I would suggest that any other amateurs visiting this station bring with them a notebook and tape recorder and possibly flashlight equipment for their camera — for they will need the flash to photograph the transmitters.

TRANSMITTERS

We were told that this installation accommodated transmitters for the ABC's Inland Service, and others for Radio Australia. We saw about 10 or 12 transmitters of 30 kW each (I think) for the Inland Service lined up all along one wall inside the building. In some respects these reminded me of the BBC overseas at Skelton in Kent, which I saw many years ago, and the Cable and Wireless transmitters at Ongar, just outside of London. However, unlike those of the BBC and Cable and Wireless, which were water cooled, the Lyndhurst transmitters are all air cooled, and it was explained to us the reasons why air cooling is superior in so many ways to water cooling of the valves. (The Skelton and Ongar stations each had their own independent water reticulation system, which involved considerable continuous maintenance.)

At Lyndhurst, special receivers are used to continuously monitor the output and quality of 3AR and 3LO. And should the programme lines from the city studios of the ABC to the Inland Australia transmitters fail, provision is made for the programme to be fed from the monitor receivers to the relay transmitters. Equipment is also available to make standby station announcements from special tapes feeding directly into the relay transmitters.

TIME

In another part of the premises we were able to see in a very small room where the air-conditioning is held at a constant temperature, the equipment which puts out the VNG time signals on 4.5, 7.5 and 12 MHz bands. A caesium clock located in the city is connected with this equipment. Many times I have heard the VNG pips on shortwave, and to be able to stand alongside the equipment which gives these pips to all who want them, gave me an unusual feeling. For here was the source of all that racket that used to make me hear VNG right across the 80 metre band when I was using the transverter plus CB to operate on 80. The equipment that we were looking at is very much "high technology" and would need a fully qualified specialist to describe how the equipment works in detail and, after all, we were only visitors seeing this equipment for the first time, and therefore I'm no specialist on it, but the chap who was showing us around sure knew what it was all about.

Seeing a slowly moving paper roll on a chart recorder attached to the gear, with its ink writer describing a series of hill and dale movements horizontally across the paper, I asked what this was all about and was told that this device was to keep check of the accuracy of the time signal pips themselves and the curves represented highly magnified errors in the order of millionths of a second or something.

GENERATORS

In a building adjacent to the transmitting equipment was the standby power generators. These machines were in a beautifully kept and very clean condition and on each was a notice warning stickybeaks like me to stand clear of the gear, because its operation was automatic, and it could come to life instantaneously with any failure of the external power supply to the station.

Log periodic antenna

AERIALS

Some distance away from the transmitter building, and between it and the antenna farm is a very comprehensive switching device by means of which any transmitter can be connected with any one of a number of aerials. I took a photo of the white-coated technician showing Don how this switch-gear worked. All those years ago I saw a similar switching device at the BBC station at Skelton in Kent, but this one was of course more up to date.

If I were asked what antenna of those that we saw that day was the most impressive, I would say the Log Periodic. The size of this antenna is really massive, and I had to decide which way to photograph it to give some idea of its enormity. I decided to lie on the ground and face the camera upwards to the heavens. However, in order to get it in right proportion, I would like to have included some nearby structure, but with the camera faced upwards all I could include in the picture were a few clouds. You have to see this antenna for yourself to get an idea how big it really is. But there was I lying on the ground among the ants to get my picture.

This massive aerial can be rotated, and we were told that it's a standby antenna for Radio Australia and can be oriented to face any direction in which it is desired to send a programme should the regular antenna for that service be out of action. Look at the dimensions of the 14 elements on this antenna and one can well believe that it is capable of covering all frequencies from about two to thirty megahertz.

Antennas from the roadway

We spent the best part of a day at Radio Lyndhurst and were made more than welcome by the Officer-in-Charge, Ken Bytheway, and the white-coated technician who took time off from his other duties to show us around the place. I was given a list of the call signs and names of all the amateur operators who work at Radio Lyndhurst, to be included here, but unfortunately I have lost that list, and I did so want to tell you who they all are. The only way that one can really appreciate everything that is to be seen at Radio Lyndhurst is not so much by reading what I have endeavoured to put down here, but to go and see the place for yourself, and I know that especially if you are an amateur radio operator, you will be more than welcome there as Don and I were. And don't forget to take a notebook or tape recorder — you'll need it. I couldn't possibly memorise all that we were told about the station that day. ■

UHF Prescaler — the Easy Way

M. F. M. Tuck VK3ZOV
257 Dendy St., E. Brighton 3187

Numerous articles have appeared which have given details of prescalers using various available ECL chips. Generally, at higher frequencies it is necessary to prescale by 100 rather than by 10, so mostly they have used either Highspeed TTL or Twisted Ring Counters to achieve the second stage at lowest cost.

This generally involves a larger board layout and does not always allow the best operation of the first stage.

Readers may be interested in the following simple, but not necessarily cheap solution.

The first stage uses the 11C90 divide by 10/11 650 MHz counter, which has provision on the chip for TTL and ECL outputs. The second stage uses the more common 95 H 90, and the whole is built on a very small stripline board.

The input line is 50 ohm. Output is provided from both divide by 10 and divide by 100 at TTL level with a 5V supply.

The original unit has been in use for several years as a plug-in for a basic 40 MHz counter.

The protection diodes do not degrade the performance. The author's unit works happily at 700 MHz. In view of the low input impedance, better matching is achieved by use of an input coupling loop. Naturally as the frequency gets higher the sensitivity falls off, but the 11C90 has the handy feature of a self-biased input which always makes the best it can of the situation!

The suggested board layout is given. Gross deviation is not recommended as ECL is very sensitive about lead lengths. All GROUND POINTS are soldered on both sides to ensure a good ground plane.

The prototype used a BNC connector with a milled block to which the board was screwed with 8 BA screws at right angles. It could have been improved, but it works! ■

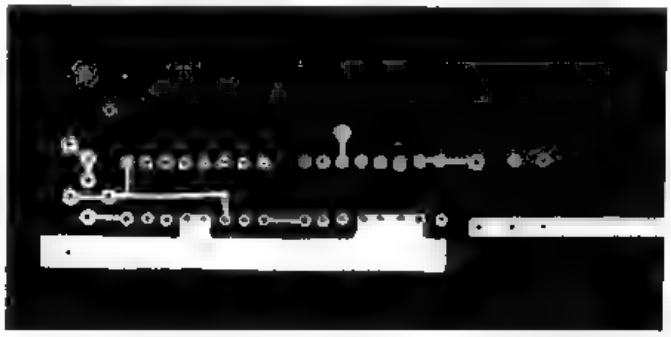
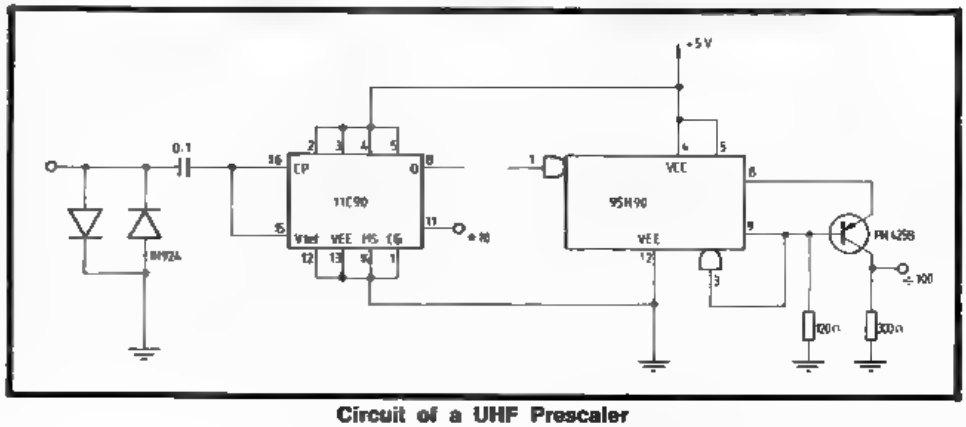
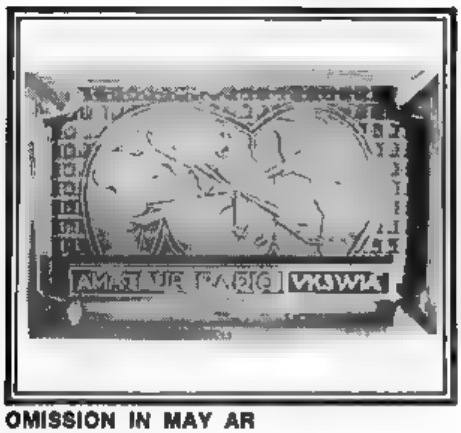


Photo Mask



Circuit of a UHF Prescaler

AR SHOWCASE



OMISSION IN MAY AR
AR SHOWCASE
ITEM: NOVELTY WALL PLAQUE

The address for Bruce and Pam Saxon VK3BWX and VK3NSB was omitted from the text.

Bruce and Pam may be contacted at 77 Edithvale Road, Edithvale, Victoria 3196 Phone (03) 772 1975.

Please amend your copy now.

THE BEARCAT 150FB DESK-TOP SCANNER

Dick Smith Electronics has released the most inexpensive desk-top scanner available in Australia today. It enables you to hear tomorrow's news, today The Bearcat 150FB Scanner monitors essential service frequencies and you can hear it as it happens

The Bearcat 150FB Scanner is a 10 channel crystal-less programmable scanner covering a large part of the UHF and VHF Spectrum.

The frequency ranges covered are:—

- UHF from 406-490 MHz (this is reception of the full amateur 70 centimetre band).
- 66-98 MHz (which includes Australian VHF low band allocation).
- 144-174 MHz (this includes amateur 2 metre band and VHF high band).

With the Bearcat 150FB, you don't need crystals. You can programme the frequencies into it and change them at any time and programme different frequencies, as you prefer Features include a smooth touch-sensitive keyboard (no knobs or switches), lighted 8 digit display to show the frequency programmed for each channel, special scan function and command confirmation.

The specifications are: 10 channels, 0.5 uV VHF-0.8 uV UHF sensitivity, a scanning speed of 16 channels/ second (2 second selective delay), 8 digit fluorescent display, "Touch Sensitive" type keyboard, 240V AC power, and a telescopic antenna (supplied); with provision for external antenna.

The Bearcat 150FB Scanner is available from any Dick Smith Electronic store. ■

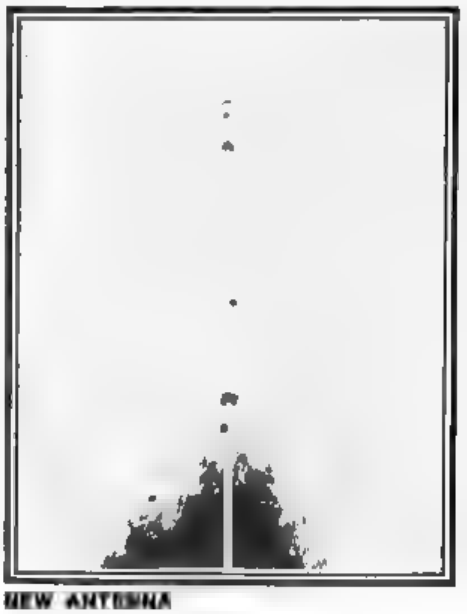
32 MEMORY CHANNELS FOR THE JIL SX-200

The JIL SX-200 is unique with its coverage of such a broad range of frequencies (26-88, 108-180 and 360-514 MHz) and it is capable of receiving over 33,000 frequencies in either AM or FM. Due to the excellent features these scanners offer, over 1,700 have now been sold Australia-wide.

It is now possible to increase the memory channel capacity of the JIL SX-200 scanning receiver from 16 channels to 32 with a "32 Channel Memory Expansion Kit" just available. Called the Model EXP-32, this kit allows the SX-200 to scan either one of the two 16 channel memory banks separately or the entire 32 memory channels consecutively.

For anyone who is reasonably competent with a soldering iron the kit is easy to assemble and install within the receiver and takes about an hour to do.

For further details contact the distributors, GFS Electronic Imports, 15 McKeon Road, Mitcham, Victoria 3132. ■



NEW ANTENNA

Chirnside Electronics Pty. Ltd. have recently released a new 80m-10m trap vertical antenna. Unlike the very popular model, the CE-5B trapped vertical which is 9.5 metres tall and needs guying, this new model, CE-5SS is a self supporting type and only stands 4.8 to 5 metres tall Because only two traps are used costs are kept to a minimum. The CE-5SS is very easy to adjust and can be either ground or roof mounted (or similar) It can be very easily disassembled into four pieces and put back into place in a flash, which should prove ideal for portable or caravan [illegible]

Power handling is 1 kW PEP on 10/15/20m and up to 400W PEP on 40m and 80m, which is more than adequate for our local conditions The traps and the antenna are completely waterproof Zinc plated and stainless steel hardware is used for long life and durability Comparing what is available on today's market, this may well be the lowest priced vertical antenna available.

For further enquiries contact Chirnside Electronics Pty. Ltd., 26 Edwards Road Chirnside Park, Lilydale, Vic 3166. Phone (03) 726 7353. ■

AMSAT AUSTRALIA

Bob Arnold VK3ZBB
41 Grammar Street Strathmore 3041

NATIONAL CO-ORDINATOR
Chas Robinson VK3ACR

CORRESPONDENTS
VK3YQX, VK5AGR, VK7PF

INFORMATION NETS
AMSAT Australia
Control VK3ACR
1000Z Sunday and Wednesday, 3.680 MHz winter, 7.064 MHz summer.
AMSAT Pacific
Control JA1ANG.
1100Z Sunday, 14.305 MHz.
AMSAT SW-Pacific
Control: W6CG.
2200Z Saturday, 28.880 MHz.

QSL CARDS
Andy VK3YQX has sent me one of his new QSL cards, which has been produced by AMSAT and personalised with his own call sign and QTH.

These cards will be ideal for the many operators anticipated on the Phase III satellites and I suggest your order be placed in good time.

Send for a copy of AMSAT's official order form, C/o AMSAT QSL, PO BOX 27, WASHINGTON, DC 20054, USA.

SATELLITE UP-DATE
AO8 and the RS series continue to operate satisfactorily.

UO9 Despite several attempts to break through the desense of the 2 metre command receiver the satellite still remains in the "two beacon on" state. It is now proposed to transmit high power signals to the 70 cm command receiver with the hope that these may override the desense signal and remedy the fault.

The following abbreviated information, obtained from Dr Martin Sweeting, leader of the UOSAT project, was originally published in and is reprinted by courtesy of AMSAT UK newsletter. It is dated 2nd May, 1982.

"During the transfer of software in the spacecraft the primary spacecraft computer issued a false command which, under normal circumstances, would be corrected using the fail-safe software in the computer.

It is estimated from measurements that the computer would issue one false command in 100 million. On this occasion the computer chose to switch ON the 435 MHz TLM beacon and that in addition to the 145 MHz beacon already on has caused some desense to both command receivers.

The fail-safe software had been overwritten during a test and the replacement had not been loaded when the false command occurred.

It is likely to take several weeks to rectify the position at which time a second fail-safe programme will be loaded into the spacecraft secondary computer in addition, to ensure no further occurrence of this problem."

A NEW AMATEUR SATELLITE
Monday, 17th May 1982, at 1107Z was a time of historical significance for the USSR and also became one for the amateur fraternity. A couple of days after Cosmonauts Anatoly Berezovov and Valentin Lebedev docked their Soyuz T5 with orbiting laboratory Salyut 7 they literally tossed overboard a 28 kg amateur satellite ISKRA number RK02. RK02 was quickly located by amateurs world-wide through its beacon on 29.578 MHz, which transmits the satellite call sign and a series of telemetry groups of letters and figures. The satellite would appear to be close to Salyut 7 (when writing 26/5/82), giving an orbital period of 91.2177 mins and an angular increment of 23.1938. The inclination is 51.59 and the height about 354 km. The beacon can be adjusted to provide an output power of either 300 mW or 1 watt. RK02 carries a transponder of unique

ORBITAL PARAMATERS — Time: GMT

	Oscar 8	Oscar 9	RS 3	RS 4
Period	103.2461952	95.4709	116.519216	119.395882
Drag	3.35832 E-6	1.253217 E-4	2.4 E-7	2.4 E-7
Increment	25.810794	23.8685	29.756588	29.975882
I Drag	5.1819 E-4	3.152992 E-5	0	0
Ref Orbit	21450	3411	2000	1986
Ref. Eqx.	001415	000708	011300	003318
Ref Deg.	74.7	136.0	78.6	67.1
Date	21/05/82	20/05/82	31/05/82	31/05/82

	RS 5	RS 6	RS 7	RS 8
Period	119.555556	118.7178	119.197024	119.765476
Drag	2.4 E-7	2.4 E-7	2.4 E-7	2.4 E-7
Increment	30.015833	29.806235	29.926071	30.068333
I Drag	0	0	0	0
Ref Orbit	1983	1998	1988	1978
Ref. Eqx.	015225	015320	015545	004839
Ref. Deg.	86.7	88.4	88.1	70.3
Date	31/05/82	31/05/82	31/05/82	31/05/82

characteristics having an input frequency of 21.230 to 21.270 MHz and a down frequency of 29.580 to 29.620 MHz. An uplink power of 200W ERP is required to access the transponder. The satellite will be short lived but may still be operable when these notes are published. Perhaps I should mention that, due to the low altitude of RK02, the maximum slant range for operation is only slightly in excess of 2,000 km and the maximum pass time is only 10 minutes. ■

BOOK REVIEW

Iain Morrison VK4KIG
29 Andaman Street, Jamboree Heights 4074

FERRO-MAGNETIC CORE DESIGN AND APPLICATION HANDBOOK

M. F. "Doug" De Man 1981.
Published by Prentice Hall Inc.
ISBN 0-13-314088-1

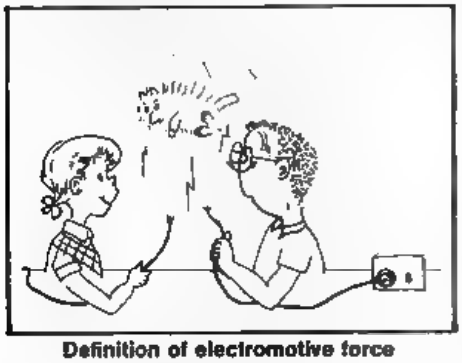
If you work or play with RF inductors seriously then this book is a must, as it lives up to the reputation and quality of the author's previous publications. The title should have been "Radio Frequency Core Design and Applications" as it is, with a small exception, all RF applications, as opposed to the myriad of other texts on the subject, that don't go higher than 100 kHz or so.

The text is readable, the maths are bearable and usable for those of us who are a bit rusty or wary! There are five chapters covering:—

1. BASICS OF MAGNETIC MATERIALS.
2. APPLICATIONS OF RODS, BARS AND SLUGS.
3. APPLYING TOROIDAL CORES.
4. BEADS, SLEEVES AND POT CORES.
5. PERMANENT MAGNET DATA.

The last chapter is dead weight as far as RF is concerned as it covers how to select, magnetise and preserve magnets. The five appendices are a good finish to the book, presenting further references, unit conversions and cook-book solid design details for the various core shapes. Altogether a total of 230 pages (of 251) of much sought after RF design and applications information.

My copy was obtained from the US direct for approx $20 US. ■



Definition of electromotive force

SPOTLIGHT ON SWLing

Robin L. Harwood VK7RH
5 Helen Street, Launceston, Tas. 7250

BATTLE OF THE AIR

As I expected, the Falkland/Malvinas crisis exploded into warfare in early May. The crisis has escalated as well on short wave, with both sides having a verbal battle over the airwaves. As the British Task Force moved closer to the Falklands, an Argentine "clandestine" station called Radio Liberty began broadcasting in English to the troops,. with a husky female announcing news from home and urging the troops to go home. It was heard on 17.740 MHz from 2300 hours UTC in Europe and South America. Reports have said it has also been heard on 25.680 MHz. Unfortunately, we were unable to intercept this station here in Australia, because the Voice of America uses this channel to broadcast to Australasia and the Pacific at that time, and there is no propagation on 11 metres between South America and here.

JAMMING

It was not too long before the Argentines turned their transmitters to more immediate uses. The BBC Latin American Service in Spanish came under selective jamming, so much so that London increased broadcasts in Spanish language to the region. I said that it was selective jamming, because it was mainly confined to news and current affairs programmes. The jamming consisted of a very raspy 400 Hz note and was easily observable here. Also the Argentine External Service increased their transmission hours.

DAILY UPDATES

The special transmissions from the BBC for residents on the Falklands have also been made daily now, using the Ascension Island relay site. We have not been able to hear it on either 15.400 or 11.820 MHz due to propagation, but the Daventry feeder on 15.670 MHz LSB was heard from 2120 to 2200 UTC.

The British Forces Broadcasting Service began broadcasting messages and requests from home for members of the Task Force, also using the Ascension Island relay at 1100 UTC on 21.490 and 17.840 MHz. However, Radio Moscow is on both channels broadcasting in Asian languages, thus preventing us hearing it.

PROPAGANDA!!

Just a few days prior to the British troops landing on the Falklands, the Ministry of Defence in London requisitioned one of the Ascension Island transmitters, which they used to broadcast propaganda and music to the Argentine garrison on the Malvinas. I believe it was a mixture of subtle and very crude propaganda, together with sports and pop music. Called Radio Atlantico dell Sur, this Spanish language station really antagonised the Argentines, and was continually jammed when it appeared on 9.710 MHz between 0815 and 0945 UTC, and from 2300 till 0200 UTC. Again the jamming took the form of a very rapsy 400 Hz note and was heard here.

At the time I am writing this, there seems to be no sign of a peaceful conclusion of the conflict, so there could conceivably be more developments, especially if Britain regains the entire chain. I think we will hear quite a deal about the Falklands over short-wave during the next few weeks.

LETTER FROM ZL

It appears that the pressure exerted by SWLs, as well as New Zealand expatriates, has had some effect over the decision to wind up Radio New Zealand's External Service, judging by a letter received by Fred Reid VK7FD, of Burnie (Tasmania). This letter was from the NZ Prime Minister's Office, and confirmed that the Government, through the Ministry of Foreign Affairs, cannot see its way clear to continue funding of the external service beyond the 31st of March, 1982, and leaving the final decision with the Broadcasting Corporation whether it could continue to operate it from their own resources, or from some form of commercial sponsorship. Apparently negotiations are under way with Radio Rhema, a religious broadcaster, and the BCNZ with a view of taking over the External Services from the BCNZ. These programmes were originally scheduled to conclude at 1215 hours UTC on Friday the 7th of May, but this decision was reversed, pending the outcome of these negotiations.

Since May 7th the External Service programming has ceased and the transmitters are relaying the National Programme. This means the popular "New Zealand Calling" with Tony King and Arthur Cushen are now not being heard.

CODE, CODE AND MORE CODE

Many years ago this magazine had an article by the late Ken Gillespie VK3GK on utilizing the HF maritime communication stations to improve your proficiency in Morse code. I thought it would help some SWLs and amateurs if I could update the frequencies and information from that period. So you will see the list of some of the stations I have been able to observe in Fig. 1. These stations operate continuously on a fixed allocated channel and monitor another nominated frequency where ships can call the required station. When contact is established, the ship goes to his working frequency and passes his traffic. The International Code is still employed by all stations, but more are utilizing either the SITOR pulse system, or RTTY. Nevertheless, there is plenty of code about for those wishing to brush up.

However, a word of warning, Japanese stations use a different system — the Koto

FIG. 1: HF MARINE COMMUNICATION STATIONS

Freq. MHz	Call Sign	Location and other Information
4.286	VHP/VIX	Belconnen, ACT — RAN Drills and WX Information
6.348	HWN	Paris France — French Navy
6.4075	GKC	Portishead (near Bristol), UK
6.4285	VHP/VIX	Belconnen, ACT — RAN
6.430	CFH	Halifax, Nova Scotia — Canadian Navy
8.437	JOS	Nagasaki, Japan
8.4445	KFS	San Francisco, California — Also on 8.5585
8.4456	XSX	Taiwan? — WX reports daily 1040 UTC
8.4531	VAI	Vancouver, BC — WX at 02/06/17 hours UTC
8 460	PPJ	Brazilian, QTH unknown
8.463	CKN	Vancouver, BC — Canadian Navy, also on 6.946
8.473	HLG	Korean, QTH unknown
8.4745	WLO	USA
8.476	9VG	Singapore Radio
8.478	TIM	Limon, Costa Rica — Also on 13.0996
8.4785	FUF	Fort-De-France, Martinique — French Navy
8.479	JCU	Choshi, Japan
8.486	WOE	Lantana, NJ (USA)
8.489	XSQ	China (PR) — Also on 8.514
8.502	XSG	Shanghai, China — Also on 8.665
8.504	ZLB	Awarua, NZ (near Invercargill)
8.521	VIS26	OTC, Sydney, NSW
8.5642	DZE	Manilla R., Philippines — Tfc. List 1130 UTC
8.5675	DZR	Manilla R., Philippines — Different to above
8.573	CLA	Havana, Cuba — Also 8.702
8.579	DZO	Manilla, Philippines (RMP)
8.582	KLB	Seattle, Washington (USA)
8.586	WCC	Chatham, Mass. (USA) — RCA Comms, Cape Cod — Also 8.630
8.591	KOK	Los Angeles, California
8.5985	ZLO	Iritangi, NZ — Naval
8.619	VRN	Royal Naval Station, Hong Kong
8.646	FUJ	French Naval Station, Noumea, New Caledonia
8.666	KLC	Galveston, Texas
12.125	CKN	Vancouver BC — Naval
12.135		Various US Naval Stations in the Atlantic Region
12 6956	KFS	San Francisco, California
12.698	ZSC	Capetown, South Africa — T/S 0755-0800 UTC
12.700	XSQ	China
12.7044	WLO	USA — Location unknown
12.707	ZLO	Iritangi, NZ — Naval
12.724	9VG57	Singapore Radio
12.726	CFH	Halifax, Nova Scotia — Canadian Navy
12.808	VTG4	QTH unknown; India
12.8265	WNU34	Slidell (USA)
12.843	HLO	Korean Station
12.849	ZSJ5	Johannesburg, South Africa
12.8745	HPN60	Panama City, Panama Republic
12.876	VAI	Vancouver, BC — Same as 8.4531
12.878	JCU	Choshi, Japan
12.8695	NMO	Pearl Harbour, Hawaii — US Navy West Pacific Fleet
12.9075	VHP/VIX	Belconnen, ACT — RAN
12.9255	WCC	Cape Cod, Mass. — RCA Comms — Also on 13.033
16.862	EBA	Spain; QTH unknown
16.8745	ZLO	Iritangi, NZ — Naval
16.9187	VHP/VIX	Belconnen, ACT — RAN
16.9475	VIS	Sydney, NSW — OTC
16.9575	FUJ	Noumea, New Caledonia — Same as 8.646
16.9805	DAM	Elmshorn, Federal Republic of Germany
17.0647	KOK	Los Angeles, California
17 1032	XSG	Shanghai, China
17 1435	DAN	Norrdeich, Federal Republic of Germany
17.1465	4XO	Haifa, Israel
22.4278	9VG	Singapore — Tfc. List at 0245 UTC
22.461	FUJ	Noumea, New Caledonia
22.474	VIS	Sydney, NSW — Tfc. List at 0250 UTC
22.485	VHP/VIX	Belconnen, ACT — RAN
22 557	KPH	Bolinas, California — RCA Comms Tfc. List at 0300 — Also o 22.5675

I hope that this list will be helpful to you. It is not designed as a comprehensive listing, but only as a guide.

Kana or Japanese alphabet a lot of the time, so it can be confusing. Incidentally, the other codes and alphabets can be found on page 18 of the WIA 1981/82 Call Book.

Also several stations broadcast weather and navigational information at certain times of the day. Some even have press service copy. As well, they issue lists of traffic on hand at the station several times daily.

However, another use to which amateurs can put these stations is as a propagation indicator. Most stations have an identification marker going, when they are not passing traffic. This is to allow the ships to determine if they have propagation on any of the particular marine bands. If signals are not audible on one band, the operator can check the marker on a higher or lower band.

So amateurs and SWLs should be able to determine where propagation is going by observations on the nearest marine bands to the amateur allocations. These stations correlate very well, compared to trying to make determinations from the more powerful broadcasting outlets. For instance, the propagation on 20 metres can be readily ascertained by monitoring both the 12 and 16 MHz marine allocations. You may be surprised to hear ZSC, Capetown Radio, on 12 MHz as late as 1030 UTC.

Until next time, all the best of DXing and 73 — Robin VK7RH. ■

MAGAZINE REVIEW

Roy Hartkopf VK3AOH
34 Toolangi Road, Alphington 3078

(G) General. (C) Constructional. (P) Practical without detailed constructional information. (T) Theoretical. (N) Of particular interest to the novice.

ZERO BEAT February 1982
Discussion of Amateur Examinations (G). Five Year Cumulative Index (G). Converter for Facsimile Transmission.

CQ December 1981
Home-brew ASCII Keyboard (P).

CQ January 1982
SWR (G) Satellite Television (G).

CQ February 1982
Satellite TV Issue (G)

CQ March 1982
Two Metre Simple Transverter (C).

HAM RADIO January 1982
Two Metre Converter (C) (also ref CQ). Wilkinson Hybrids (GT)

CQ TV No. 117 February 1982
24 cm Down Converter (P). BATC Test Card (G). 24 cm ATV Exciter (P). 24 cm Linear Amplifier (P). ■

NOW 32 MEMORIES
See below for details

NEW J.I.L.SX-200

GFS electronic imports

NOW MONITOR AIRCRAFT, POLICE, AMBULANCE, 10, 6, 2 & 0.7mx AMATEUR BANDS. HF & UHF CB, PLUS HUNDRED MORE. INCLUDING SERVICES IN THE AUSTRALIAN LOW BAND

FEATURING:
- Airband
- Australian low-band

J.I.L. *REGD T M

Ask about our range of BASE ANTENNAS.

PROGRAMMABLE SCANNER DOES IT ALL. 26 - 180MHz, 380 - 514MHz.

SPECIFICATIONS

Type	FM & AM			
Frequency Range	a) 26-57 995 MHz	Space	5 kHz	
	B) 58-88 MHz	Space	12.5 kHz	
	c) 108-180 MHz	Space	5 kHz	
	d) 380-514 MHz	Space	12 5 kHz	
Sensitivity	FM a) 26-180 MHz	0 4uV	S/N 12 dB	
	b) 380-514 MHz	1 0uV	S/N 12 dB	
	AM a) 26-180 MHZ	1 0uV	S/N 12 dB	
	b) 380-514 MHz	2 0uV	S/N 12 dB	
Selectivity	FM	More than 60 dB at —25 kHz		
	AM	More than 60 dB at —10 kHz		
Dimensions	210 (W) x 75 (H) x 235 (D) mm 8-1/4 (W) x 3-1/4 (H) x 9-1/8 (D) in.			
Weight	2 8 Kgs			
Clock Error	Within 10 sec /month			
Memory Channel	16 Channels			
Scan Rate	Fast	.8 Channels/sec		
	Slow	.4 Channels/sec		
Seek Rate	Fast	10 Channels/sec		
	Slow	5 Channels/sec		
Scan Delay Time	0 or 4 sec			
Audio Output	2 Watts			
Ant Impedance	50-75 ohms Whip or External Antenna with LO/DX Control (20 dB ATT)			
Freq Stability	26-180 MHz	Within 300 Hz		
	380-514 MHz	Within 1 KHz		

The new SX-200 represents the latest STATE-OF-THE-ART technology in the development of Scanning Monitor Receivers. It has many features that previously have not been available on receivers of its type.

For example the tremendous frequency coverage, which encompasses all of the following bands — HF & UHF CB, 27 & 155MHz MARINE, Australian LOW BAND, AIRCRAFT band, VHF SATELLITE band, 10Mx, 6Mx,2Mx and 70CMx AMATEUR, VHF HIGH BAND and UHF TWO-WAY band Other features include Automatic detection of AM or FM on all bands, Squelch Circuitry that can be used to LOCK OUT carrier only and spurious signals, Fine Tuning control for off channel stations, 240 VAC plus 12VDC operation, Squelch Operated Output that may be used to trigger a tape recorder or channel occupancy counter and accurate Quartz Clock

EXTRA 16 MEMORY CHANNELS WITH THE EXP.32 MEMORY EXPANDER KIT

- TOTAL OF 32 MEMORIES
- EITHER BANK OF 16 CAN BE SCANNED SEPARATELY

PRICE: $48.00
(plus $2.00 P & P)

$512
+ $8 P&P

TRADE ENQUIRIES WELCOME

Australian Agent

AUTHORISED DISTRIBUTORS:
W.A.: Letco Trading Co. (09) 387 4966
N.S.W. Emtronics (02) 211 0531
Qld C.W. Electronics (07) 397 0808
S.A.: Jensen Intersound (08) 269 4744
Plus many other regional outlets

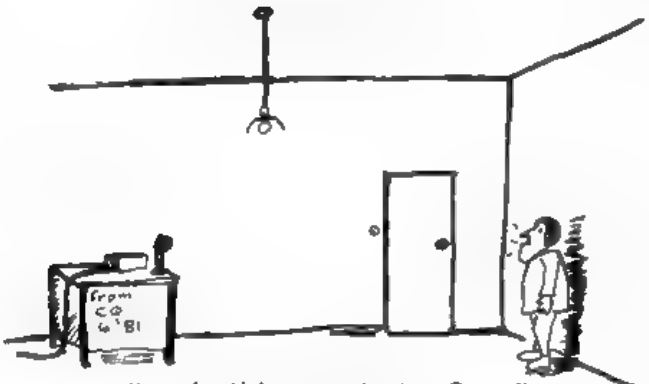
G.F.S. Electronic Imports, 15 McKeon Road, Mitcham, Vic. 3132 (03) 873 3939

STOP PRESS

A THIRD PARTY TRAFFIC ARRANGEMENT BETWEEN AUSTRALIA AND THE UNITED STATES OF AMERICA BECAME EFFECTIVE ON JUNE 25, 1982.

DETAILS NEXT MONTH.

☆ CAUTION ☆
Attention is drawn to Paragraph 6.4 of the Amateur Operators Handbook.



"...Is this any better?..."

COME IN AND MAKE US AN OFFER

AT LEAST WE'LL MAKE YOU AN OFFER!!

(TEA, COFFEE, CHOCOLATE OR . . . CHAMPAGNE??)

We are **overstocked** with **FT-707's, 208R's, 290R's**

Also on Special:

★ 22 amp 13.8V 50% duty cycle
POWER SUPPLIES — $129.00 (P & P extra)
EXPERT REPAIRS DONE
Enquire about our LINEAR AMPS

timeplus

55 SYDNEY ROAD, BRUNSWICK, VIC., 3056
PHONE (03) 380 4942

Open: Mon.-Fri. 9 am-6 pm Sat 9 am-1 pm
BANKCARD, LAYBY, MAIL ORDER WELCOME

wo6c6

Advanced Electronic Applications, Inc.,
Brings you the Breakthrough!

CONTESTING?

THE NEW LOW COST CONTEST KEYER MODEL CK-1 WILL MAKE YOU MORE COMPETITIVE THAN EVER!

$178.00 plus S.T.
SUGGESTED AMATEUR NET

- Automatic Serial Number Generator from 01 to 9999
- 500 Character Soft Partitioned™ Memory that can be divided into as many as 10 messages
- Exclusive memory editing capability
- Two presettable speeds with fast recall plus stepped variable speed selection
- Iambic operation from 1 to 99 wpm and complete weighting control
- Extreme R.F. immunity, will key any modern transceiver, operates from 12 ± 3 volts D.C.

SEE YOUR FAVOURITE DEALER OR CONTACT

the radio centre

Aerodrome, Archerfield,
P.O. BOX 136, ARCHERFIELD,
QUEENSLAND, AUSTRALIA, 4108
Telephone: (07) 275 3030 — 277 5624

NEW PRODUCTS
COMING SOON FROM GFS AND STANDARD

C-58E
2 METRE MULTI-MODE PORTABLE

- Small size (129 mm W x 52 mm H x 190.5 mm D)
- 144-148 MHz, up to 4000 channels
- FM, SSB, CW Modes
- LCD Display, 5 memories plus scan
- Tx 1W output, RX 0.223 muV (12 dB SINAD)

ORDER YOUR C-58E NOW
Price: **$319** ($8 P & P)

C-900
VHF FM TALKMAN

- Provides hand free communications
- Range up to 1 km
- Easy to use with half headset and boom mike
- Lightweight, 250 grams
- DOC approved, operates in 55 MHz band
- Thousands of applications fire fighting, security antenna installations, car clubs, factories, search and rescue, hang gliding etc

Price: **$119** each (plus $5 P & P)

GFS ELECTRONIC IMPORTS

15 McKEON ROAD, MITCHAM, VIC. 3132
P.O. Box 97, Mitcham, Vic. 3132
Telex: AA 38053 GFS
Phone: (03) 873 3939, 873 2652

VHF UHF - an expanding world

Eric Jamieson VK5LP
1 Quinns Road Forreston, SA 5233

AMATEUR BAND BEACONS

"I DO NOT BELIEVE IN A FATE THAT FALLS ON MEN HOWEVER THEY ACT, BUT I DO BELIEVE IN A FATE THAT FALLS ON THEM UNLESS THEY ACT!" And that's how I felt when the Editor suggested it was necessary to save some space by not having the beacon list every month, but having them periodically with any updates in between. So it's like the saying "IT'S ALWAYS EASY TO TELL YOUR STATION IN LIFE. SOONER OR LATER, SOMEONE TELLS YOU WHERE TO GET OFF"!

So, accordingly, it would seem the prime time for a reminder list of beacons would be for September and March, being the start of the equinoxes. December for the Es summer activity and June leading up to the winter Es openings. Maybe it will be possible to introduce some changes to the columns in other ways as we go along. In other words, looking forward, lest "the pain in the neck we complain about may be the result of looking backwards".

SIX METRES

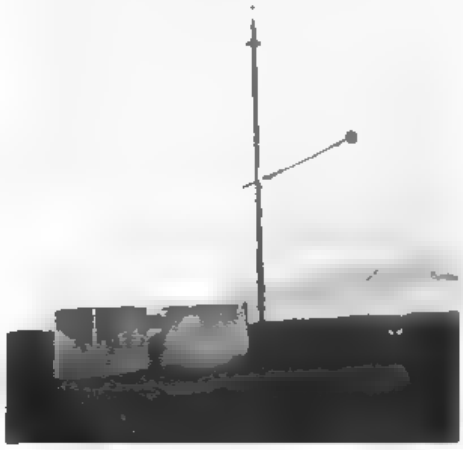
There has certainly been a dramatic rundown in the measure of activity on six metres as seen from this location. Nev VK2QF has sent a letter which outlines some of the events occurring in VK2 during the equinox, and here are extracts: "3/4: Many US signals to 45 MHz early in the morning, then worked VK8GB 0013Z 5 x 1 scatter mode, KB7IJ/KH2 0055 5 x 3, JA1 2, 3, 5, 1150Z, heard FO8DR on 50 MHz along with H44PT. 4/4: Intense W signals to 48 MHz at 2200Z, then 2304Z worked W6XJ. N6CT 2333Z, KG6JDX 2358Z, H44PT 0023Z. VS5LH 0126Z, JA1, 2, 4, 7, 8, 9, 0 0130 to 0200Z. Later around 0520Z all JA areas 1 to 0 with signals mostly 5 x 9, then KH6HI at 0842Z. On 50 MHz heard KH6EQI, YJ8RG, H44PT, VS5LH, P29ZFS, KC6UZ (0245Z 5 x 9), plus ZL and JA. Total of 140 QSOs with 130 JAs, 11 countries heard but no new ones. 5/4: Quiet. 6/4: VK2, VK5; 9/4: KG6DX. 11/4: VK1VP 2241Z backscatter. At 2254Z called VS6BE on 10 metres to report his beacon on 50.110, finally worked him split 52.115 to 50.115 at 2310Z at 559. Rest of the month relatively quiet." Thanks Nev.

THE MELBOURNE SCENE

Gil VK3AUI fills in the April jottings for VK3 and it looks very interesting. He reports, "3/4, 0002Z 3D2JT heard 50.110 but not workable on 52 MHz. 0321Z KH6IAA 5 x 3, 0816Z JA2, 5, 9, 0, 2318Z H44PT at the start of a very good opening extending to 0002Z when Peter had about worked every available VK3. Same day 4/4 (Z time) 0118 half an hour of JA8. At 0730Z more JAs. 9/4: 2310Z XE1GE heard on 50.087 5 x 9, 2316 to 2340Z heard K6MYC on 52.005 weakly. 10/4: 2210Z H44HIR 50.005 599, 2225 to 2257Z H44PT very good on 50 MHz, but nothing on 52 MHz. 12/4: 2250Z A35JT heard weakly on 52.010, 2301Z heard XE1GE on 50.110 and at 2311Z FO8DR on 50.096 529, but nothing on 52 MHz. 13/4: XE1GE copied VK3AQR at 2230Z, but no contact. 16/4: W7KMA 50.1 and 52.01 539 attempting to work VK3AMH and VK3OT. 18/4: 0015Z to 0047Z W6XJ 529 on CW worked VK3AZY, VK3XQ, VK3NM, VK3BDL, VK3AWY, VK3AQR, VK3AKK and probably VK3OT. 19/4: 0145Z KH6EQI 559 to 599, no contacts strong enough to even come in over Channel 0! 25/4: 0638Z JH2HPG worked, 1115Z VK7ZIF worked via Aurora, 1257Z Russian TV and weak JA signals. 26/4: 0042 to 1123Z JA1, 2, 3, 4, 5, 7, 8, 0. 27/4: more JA, also on 28/4 same."

Gil VK3AUI also passes on an item regarding two metres to Japan which is extremely interesting. "John VK6GU at Wyndham reports having worked two stations in Japan on 23/4/82. He worked Yuki JH4JPO at 1052Z and then JH4XTN at 1103Z. Reports of 559 were exchanged. The characteristic flutter of transequatorial signals were observed. Distances were 3424 and 3419 miles respectively as calculated by Graham VK8GB. John VK6GU was running a TR9000 with 10W output to a 10 element yagi 12 metres high. John has observed paging signals from Japan on 146.810 MHz.

"Steve VK4ZSH reports that, whilst portable at McKinlay 115 km south-east of Mt. Isa, he heard paging signals from Japan on 29/4 from 1014 to 1115Z, on 146.760 MHz from Mito City, 100 km north-east of Tokyo, and from Sendai City on 146.780 and 146.810 MHz. These localities were confirmed by JA2DDN and JA1RJU, who had a frequency list of the paging locations. Steve also reports hearing Japanese signals on 2 metres whilst in VK8, 600 km south of Darwin." That seems to be about the farthest south into VK so far reported with the Mt. Isa hearing. How long before Adelaide?



INTERESTING VHF DX

Further to the article in June AR, page 41, this is a photograph of Brian ZL1AVZ's dish which he used for this exciting contact.

HAPPENINGS IN THE WEST

It seems somewhat appropriate that the interesting VHF DX story should be followed by a letter containing some interesting information from Wally VK6KZ of 1296 MHz fame, who writes —

"I am pleased to respond to the reports of the marvellous VK2/ZL contact on 1296 MHz and congratulate the two amateurs concerned (because I know how thrilling it must have been) and, at the same time, point out that amateur radio distance records in the Call Book are now not up to date.

"However, on a positive note, Don Graham VK6HK and I VK6KZ continue our march upwards in operating bands and have lodged a claim with the WIA for a State record of 69.9 km on 3.456 GHz. On 10/4/82 I went portable at various points along our Darling Scarp and the furtherest point was at North Dandalup back to Wembley Downs. Reports were 418 to VK6HK with 4 x 5 to me from Don. We are both using varactor multipliers from 1152 MHz with very little power out (less than 1 watt) to 1 metre diameter dishes. On this occasion we were using FM and CW, although I have a speech processor (a la VK5QR) for SSB from my home QTH. Attempts to exceed the Australian record of 114 km were unsuccessful on this occasion — however, we will continue our efforts!! Converters in both cases are interdigital types based on "VHF Communications" articles with 144 MHz IF. We are looking into pre-amplifier designs to improve noise figures as well as improving the transmitter output powers.

"Hans VK6ZT has made his first contacts on 432 MHz moonbounce and played tapes of signals from West Germany and Italy to the last VHF Group meeting. I don't have any more details, but it has been a long haul for him working largely alone to develop his system and it is nice to see his success, certainly a first for VK6 as far as contacts are concerned.

"Mike VK9ZYX has a low power FT290R and I have urged him to look for a linear! He is active on 52 MHz.

"The long haul contacts to JA on 144 MHz by John VK6GU are exciting. I was up in Karratha the week preceding John's first contact and kept monitoring 144 MHz hoping for some Indonesian activity, but that is too optimistic for a two night period! It will happen eventually judging by the regular appearance of Indonesian TV on channels around Australian Channel 10

along the coastline. The best I did on 17/4 and 18/4 was to work VK8GB and a number of JAs on 52 MHz, as well as hearing P29SIX beacon using the whip on my IC502."

Thank you for that interesting letter Wally, congratulations on your efforts on 3.456 GHz with VK6HK, and I am sure we wi l all be waiting to see if you can grab that Australian distance record.

Wally also sent details of the 54.1 MHz radar being built at the Buckland Park field station of the University of Adelaide for atmospheric studies. For those interested the radar will operate with a pulse length of 6.7 us., repetition frequency 1024 Hz, peak power 40 kW with a mean power of 329W, height resolution 1 km, beamwidth (half power) 3 degrees and the power-aperture product 2.4 x 10^6 Wm^2.

As of May 1982 the station is about half completed and will operate in a similar manner to other coherent phased array atmospheric radars. Its applications will be important to work in the meteorological field and there is a particular application to aviation. The availability of continuous observations of winds in the troposphere and lower stratosphere will allow better flight planning for efficiency and economy. It has been estimated that such observations lead to annual fuel savings of up to $100 in the US. When completed the VHF radar will give continuous monitoring of winds and turbulance up to about 30 km. It is situated adjacent to the large 2 MHz radar which gives similar information for the ionized region between 55 and 100 km. This is the only VHF radar of its type in the southern hemisphere. I am indebted to "The Australian Physicist", vol. 19, May 1982, for the above information. It will be interesting to see what effect this radar will have on the 6 metre band in VK5.

CORRECTION

A short note from Eric Trebilcock L30042 corrects an item in May 1982 AR where, on page 20, column 1, paragraph 3, line 7, I said C32AB in the Line Islands Group should be worth working . . . it should read T32AB as C3 is Andoora in Europe. Please make that correction, and I thank Eric for drawing my attention to that error.

OVERSEAS NEWS

Not a lot to report at the moment. However, "The Short Wave Magazine" reports that Henry Wilson EI2W sent in a sheet listing "firsts" from EI to many other countries on 6m, 4m, 2m and 70 cm, many of which he holds himself. During cycle 21, EI2W made 3,020 QSOs on 6 metres and worked 741 different stations on SSB, in all W call areas, and in VE 1-4.45 US States were contacted, as well as stations in I, KP4, KV4, XE and 5B4. EI stations do not now have the use of the band.

Also reported was an SWL who received stations and beacons in 18 countries between 16/12/79 and 25/11/81, being C5, EL, FY7, HI, I, K, KP4, KV4, PA, VE, VP2V, VS6, YV, ZB2, ZS3, ZS6, 5B4 and 8P6. He used a converter to a FRG-7000 received and a groundplane! Looks like the UK had plenty of exotic signals landing there without the ability to work them.

The May 1982 CQ magazine from Japan (courtesy JR6IGG and VK6RO) contains information of contacts being made by 5Z4CS in Kenya on 50.105, and operated by JE1JKL, on 28/3/82, with JA1IDJ, JA6IMJ, JA4MBM, JA4IUO. One wonders if there was any part of the world which could not have been contacted on 6 metres at some time or other during cycle 21 had facilities existed for contacts to be made. I DOUBT IT.

That seems to be most of the news for this time. Good luck with the 6 metre winter DX, which should be available in July. Closing with the thought for the month:"A CLOSED MIND, LIKE A CLOSED ROOM, CAN BECOME AWFULLY STUFFY."

73. The Voice in the Hills. ■

FROM IMBC NEWS —
QUIZ FOR THE ROAD

Wollongong police stopped a car at two in the morning and asked where the driver was going in such a hurry? "I'm on my way to a lecture," replied the motorist.

Naturally curious, the police asked where the lecture was being held. The man gave an address identical to the one on his driving licence. "And just who will be giving this lecture?" inquired one constable.

The driver looked at him sadly and said, "My wife".

WORLD WIDE RADIO

YOUR ONLY VHF & UHF SPECIALIST
COL. FISHER VK3KAG
24 The Trossachs, Frankston, 3199
Victoria, Australia
Tel. (03) 789 3412
All Times

UNDERWOOD METAL CLAD MICA CAPACITORS	$2.60 ea.
CHIP CAPACITORS	$1.00-$5.00
CAMBION RF CHOKES	$2.30
COMMUNICATION CONCEPTS 80 watt VHF	$169.00
VHF-UHF AMP KITS, 100 watt 28V VHF	$167.00
DOUBLE BALANCED MIXERS	$12.00
AVANTI ANTENNAS	$71.20 ea.
B1016 MIRAGE VHF AMP.	$325.00

WO616

TRIO

MODEL DM-801 DIP METER

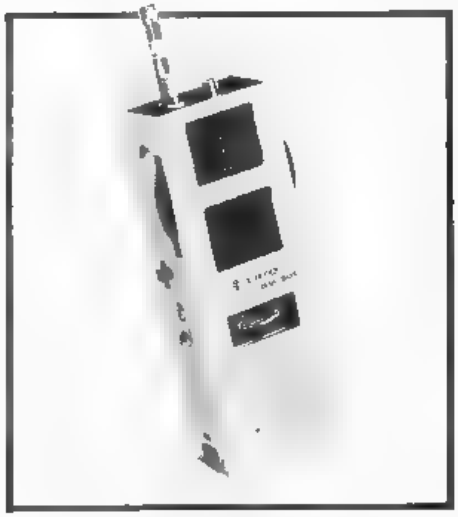
PRICE: $116.00

INC. POSTAGE

WRITE FOR BROCHURE

FEATURES:

- Measurable frequency range is 700kHz to 250MHz in seven [illegible]
- A capacitive probe allows measurements without removing coil shields
- All seven dip meter coils, capacitive probe, earphone and ground clip lead, can be carried within the unit for easy transport and storage
- Convenient for both indoor and outdoor measurements, all solid-state and built-in battery
- HC-25U and FT-243 sockets enable use as a crystal checker and marker generator
- Amplitude modulation is convenient in aligning receivers when using your DM-801 as a signal generator. Also, when used as the marker generator amplitude modulation is helpful in precisely calibrating the dial scale even for a receiver having no BFO
- An FET and transistor are used in the meter circuit to provide extremely good sensitivity
- As an absorption frequency meter, your DM-801 is both to align transmitters and measure field strength
- An earphone plug allows you to monitor transmit signals
- It is possible to measure resonant circuit frequencies of toroidal coils. This is not possible with conventional dip [illegible]



WILLIAM **WILLIS** & Co. Pty. Ltd.
PHONE (03) 836 0707

98 CANTERBURY ROAD, CANTERBURY, VIC. 3126

CONTESTS

Reg Dwyer VK1BR
PO Box 236, Jamison, ACT 2614

REMEMBRANCE DAY CONTEST 1982
Please note the changes

AUGUST 14th-15th

This contest is held to commemorate those amateurs who died during the Second World War and is designed to encourage friendly participation between all amateurs and to help in the improvement of operating skills of all participants.

This contest is held annually during the weekend nearest the 15th August, the date on which hostilities ceased in the South-west Pacific area.

The contest is preceded by a short opening address on all WIA frequencies by a notable personality.

A perpetual trophy is awarded annually for competition between Divisions of the Wireless Institute of Australia. It is inscribed with the name of those who made the supreme sacrifice and so perpetuate their memory throughout amateur radio in Australia.

The name of the winning Division each year is also inscribed on the trophy and, in addition, the winning Division will receive a suitable certificate.

OBJECTS

Amateurs in each VK call area will endeavour to contact other amateurs:—

1. In other VK call areas, P29 and ZL on all bands 1.8 through 30 MHz, except 10 MHz.
2. In any VK call area (including their own), P29 and ZL on authorised bands above 52 MHz and as indicated in Rule 5.

CONTEST DATE

0800Z 14th August, 1982, to 0759Z 15th August, 1982.

All amateur stations are requested to observe 15 minutes silence before the commencement of the contest on Saturday afternoon. An appropriate broadcast will be relayed from all Divisional stations during this period.

RULES

1. THERE SHALL BE 4 SECTIONS —
   (a) Transmitting Phone.
   (b) Transmitting CW
   (c) Receiving
   (d) Open
2. ALL AUSTRALIAN AMATEURS (VK call sign) may enter the contest whether their stations are fixed, portable or mobile. Members and non-members of the Wireless Institute of Australia are eligible for the awards.
3. AMATEURS MAY USE THE FOLLOWING MODES
   Section (a) — AM, FM, SSB, TV
   Section (b) — CW, RTTY
   Section (c) — All above.
4. CROSS MODE OPERATION is permitted. Cross band operation is not permitted excepting via satellite repeater.
5. SCORING CONTACTS:—
   (a) On all bands a station in another call area may be contacted once on each band using each mode. That is ,you may work the same station on each of these bands on Phone, CW, SSTV and RTTY
   (b) All contacts score one point.
   (c) On the bands 52 MHz and above, the same station in any call area may be worked using any of the modes listed in Rule 3 at intervals of not less than one hour since the previous same band/mode contact. However, the same station may be contacted repeatedly via satellite not more than once by each mode on each orbit.
   (d) Acceptable logs for all sections shall show at least 10 valid contacts.
6. MULTI-OPERATOR STATIONS ARE NOT PERMITTED (except as in Rule 7), although log keepers are allowed. Only the licensed operator is allowed to make a contact under his/her own call sign. Should two or more licensed operators wish to operate any particular station each will be considered as a contestant and must submit a log under his/her own call sign.
7. CLUB STATIONS may be operated by more than one operator, but only one operator may operate at any one time, i.e. no multi-transmission. All operators must sign the declaration
8. ENTRANTS must operate within the terms of their licences.
9. CYPHERS —
   The serials number will consist of three figures that will be incremented by one for each successvie contact. A contestant may start with any number between 001 and 999, but when 999 is reached he will start again at 001
10. ENTRIES:—
    Entries must be set out as shown in the example using one side of paper only. Envelopes must be marked "Remembrance Day Contest", postmarked no later than 15th September, 1982, and posted to FCM, Box 236, Jamison 2614, and received not later than 30th September, 1982.
11. TERRESTRIAL REPEATERS:—
    Contacts via terrestrial repeaters are not permitted for scoring purposes. However, contacts may be arranged through the repeater and, if succesful on another frequency, that contact counts for scoring purpose
12. PORTABLE OPERATION:—
    Log scores of operators located outside their own call area will be credited to that call area in which the operation takes place, e.g. VK5XY/2. His score is added to the VK2 scores.
13. ALL LOGS shall be set out as in the example shown and, in addition, must carry a front sheet showing the following information in this order:—
    Section, score, call sign, mode, name and address
    Declaration: "I hereby certify that I have operated in accordance with the rules and spirit of the contest."
    Signed ..... Dated
14. THE FEDERAL CONTEST MANAGER has the right to disqualify any entrant who, during the contest, has not observed the regulations, or has consistently departed from the accepted code of operating ethics. The Federal Contest Manager also has the right to disallow any illegible, incomplete or incorrectly set out logs.
15. THE RULING of the Federal Contest Manager of the WIA is final and no disputes will be entered into

AWARDS (Sections (a) and (b))

Certificates will be awarded to the top scores in each section for each call area and will include the top limited and novice station. There will be no outright individual winner. Further certificates may be issued by the FCM at his discretion.

Certificates will be issued to top ZL and P2 scorers.

VK0 scores are added to VK7 and VK8 to VK5. Scores by VK9 stations are added to the mainland call area geographically nearest. Scores claimed by ZL and P2 stations are not included in the scores of any VK call area.

The trophy shall be forwarded to the winning Division in its container and will be held by that Division for the specified perod.

RECEIVING SECTION

1. THIS SECTION is open to all shortwave listeners in Australia, Papua New Guinea and New Zealand, but no active transmitting station may enter
2. CONTEST TIMES and logging of stations on each band are as for transmitting.
3. ALL LOGS shall be set out as in the example. It is not permissible to log a station calling "CQ". The detail shown in the example must be recorded

4. NOTE the times and conditions set out in Rule 5 (transmitting)
5. CLUB STATIONS may enter this section. All operators must sign the declaration

AWARDS FOR SWLs
Certificates will be awarded to the highest scores in each call area. Further certificates may be awarded at the discretion of the Federal Contest Manager

EXAMPLE OF TRANSMITTING LOG
Date/time, call sign, number, number points, GMT, band, mode worked, sent, received

EXAMPLE OF RECEIVING LOG
Date/time, call sign, number, station, points, GMT band, mode heard, sent, called

1620	28	P	VK3NAA	077	VK6NZZ	1
0612	7	P	VK5PS	002	VK6RU	1
0618	14	P	VK0ZZ	006	VK6FI	1
0615	7	CW	ZL2AZ	004	VK4KI	1

THE CONTEST SCORE FORMULA
Participation factor × activity factor × weighting factor = logs entered × total contacts made × w/factor, total licences issued, logs entered.

This simplifies to:—

Total contacts made × weighting factor, total licences issued

WEIGHTING FACTORS FOR 1982
Based upon historical data and a linear least square regression fit to that data the predicted 1982 weighting factors become

VK1	1.2	VK5/8	2.1
VK2	10.7	VK7	0.9
VK3	7.8	VK6	1.5
VK4	4.8		

Should each State perform equally as well in 1982 as in the past eight years (averaged), the results will become a seven way dead heat. Consequently, the most improved State will take the trophy and also earn a revised and lower weighting factor for the following year

DUPE SHEETS
To assist in speeding the results of the contest, you can include a dupe sheet with your log.

This dupe sheet assists you in determining your previous contacts and assist me by providing me with an accurate log.

Republished here for your assistance is a method of producing a dupe sheet, which will take very little time to complete during a contest and will save all that looking through log sheets to see if you are duplicating your contact again. It should also provide a faster turnover of contacts. I strongly advise your use of this sort of exercise

Dupe sheet is republished from an article in AR July 1981 by John Moulder VK4YX.

DUPE SHEET FOR THE REMEMBRANCE DAY CONTEST

Avoid duplications on your log sheets during a contest can be a problem, even if you have only worked 50 contacts. The method I am about to describe is not original. I came across an article in a 1960 edition of AR, which described a method of using a dupe sheet for each VK call area, plus one for ZL and P29. As you can probably surmise, it was evolved for the annual RD contest.

Juggling a few sheets during a contest didn't appeal, so I adopted the basic idea and came up with the following.

I obtained a sheet of thin white cardboard approximately 60 centimetres square from the newsagent. I measured in 4 centimetres from each side and drew a border. Along the top and bottom and likewise down each side, make a mark each 2 centimetres. Draw a grid pattern by interconnecting all the marks top and bottom and side to side. At the top and bottom of each column, starting from the left-hand side, mark each letter of the alphabet. Do the same down each side, starting at the top.

The top left-hand corner should look like Fig 1

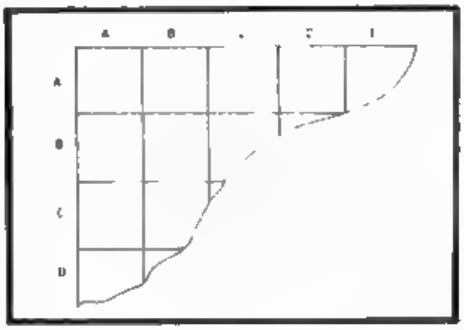


FIGURE 1

Along the top of the cardboard we label FIRST CALL LETTER. Down the sides we label SECOND and THIRD CALL LETTERS. We are now ready to go.

As an example, say we worked VK6BD on 15 metres. Looking across the top of the sheet, we locate column B; down the side we locate column D; in the intersecting square we write, 8/15. See Fig 2. If you worked P29BD on 10 metres, you would enter P29/10 in the same square. We can take two further steps if needed. You may like to enter the mode after the call sign and the time of contact, if it can be squeezed in

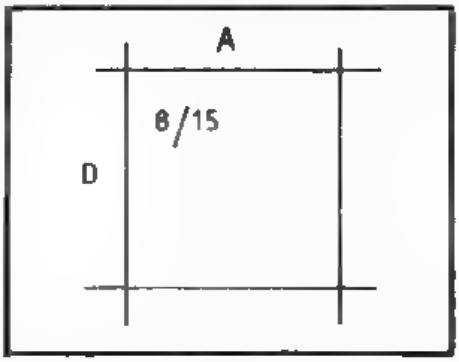


FIGURE 2

Very clever you may be thinking, but what about a call sign with a three letter suffix? As an example we'll say we worked VK7BCC on 80 metres CW, and ZL2BCA on 15 metres SSB. We locate our intersecting square of B C, and we enter 7C/80CW. Underneath this entry we write ZL2A/15SSB. See Fig 3. All the information can be fitted in a 2 centimetre square if you use a fine tipped pen. You could use larger squares, however the size of cardboard needed may make it too unwieldy. This system is used hand in hand with your normal log sheets. What I did was work a string of stations, enter them on the dupe sheet, and then continued on in a merry way

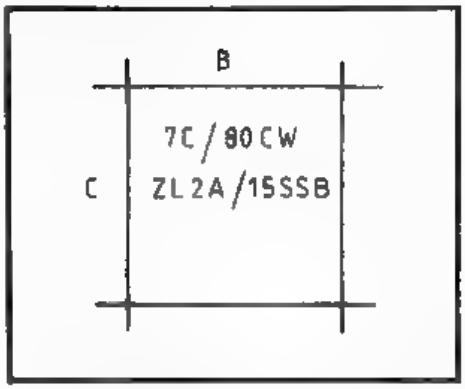


FIGURE 3

The only problem I can envisage, is the size of the sheet may make it unworkable for some operators. I got around the problem by taking over the kitchen table, which just happens to be beside our wood burning stove (very cosy). I had a great time during the 1980 RD. I made my best score, with no duplications. Unfortunately I completely forgot to send my log sheets in. Give this system a go ■

JOHN MOYLE FIELD DAY RESULTS

COMMENT
There were quite a few logs received for the contest and it is quite evident that considerable effort was put into all the contest activities and into the quality of the submitted logs, for both of these, thank you

SCORING
The scoring method seems to have been understood by most of the entrants, however some of you have mis-scored your logs. I have not re-scored these logs as the time involved to do this is prohibitive

The correct method for scoring is as follows for a portable station contacting —

1. Home station in the same call area (VK2/P to VK2/Home) 2
2. Home station in another call area (VK2/P to VK3 or JA home) 5.
3. Portable station in same call area (VK2/P to VK2/P) 10
4. Portable station in another area (VK2/P to VK4/P or WA/P) 15

These are an example only and this method can be applied to the rest of the scoring table

RESULTS
Well, it seems that the VK4s were out in force again this year, and their efforts certainly have paid off. Letters from some of

the VK4 stations have mentioned that the weather conditions were quite favourable this year and the normal rainy weather was not experienced

Quite outstanding efforts have been shown by many other stations as the results show

THE RESULTS

SECTION A — 24 hour

Call	Points	Call	Points
VK5QX*	1887	VK4XZ	526
VK5ABS	1151	VK3DHJ/4	413
VK5AZF	845	VK2DBA	365
VK5ZF	775	VK2UC	362
— 6 hour			
VK3WP*	956	VK2AMV	225
VK2EQR	776	VK3XU	198
VK2BQS	591	VK2BQW	112
VK3ADW	547		

SECTION B — 24 hour. Nil entries.

— 6 hour			
VK4VDG*	204	VK2JM	100
VK2BRC	150		

SECTION C — 24 hour

VK5VD*	1157		
— 6 hour			
VK3SP*	1274	VK1DL	652
VK2EL	1139	VK2ABZ	478

SECTION D — 24 hour

VK4WIZ*	19151	VK4WIP	3591
VK3ANR	10932	VK5BW	3145
VK4WII	6355	VK5LZ	2851
VK5SR	5535	VK5BPA	1070
VK5ACA	3602	VK2AGH	455
— 6 hour			
VK4WIN*	4422	VK2AZD	1380
VK4WIM	1794	VK2BOR	1053
VK3BYY	1759	VK3DBS	883
VK4WID	1709	VK2PJ	743

SECTION E — 24 hour

VK3APC/		VK1WI	3790
VK3ATL*	10667	VK4CAU	3502
VK3ATM	10571	VK3AWS	3332
VK3BML	8998	VK2BTZ	2073
VK2DBK	7767	VK8DA	1541
VK2WG	7003	VK3BHD	1429
VK3XK	3809		
— 6 hour			
VK3SAS*	2708	VK3BSP	1147
VK3ER	2096	VK3AUI	1102

SECTION F — 24 hour

VK3YIW*	1724	VK2KBN	1016
VK2YUP	1609	VK4XZ	484
VK1WI	1469		
— 6 hour			
VK2DCL*	467	VK5ZTP	192
VK2BGF	387		

SECTION G — 24 hour

VK2ZMP*	770	VK2DYS	265
VK4AIX	755	VK3YRP	300
VK4KAU	330		
— 6 hour			
VK2CBF*	810	VK1NEJ	295
VK2LS	517	VK3LC	220
VK1RH	425	VK2AUI	80
VK7FD	315		

SECTION H — 24 hour

L30042*	500	VK4UG	160
— 6 hour		**CHECK LOG**	
L60036*	405	VK3ALD.	

The * sign depicts a certificate winner.

CONTEST CALENDAR

July		
3-4	VENEZUELAN PHONE	CQ
10-11	IARU RADIOSPORT	CQ
17-18	INTERNATIONAL QRP	CQ
17-18	COLUMBIAN	CQ
17-18	SEANET CW	CQ
24-25	VENEZUELAN CW	CQ
24-26	COUNTY HUNTERS CW	CQ
August		
7-8	EUROPEAN CW	CQ
14-15	REMEMBRANCE DAY	AR
14-15	SEANET PHONE	CQ
21-22	ALASKA QSO PARTY	CQ
21-22	SARTG RTTY	CQ
28-29	ALL ASIAN CW	AR 6/81
September		
5	BULGARIAN CW	
11-12	EUROPEAN PHONE	
11-12	G-QRP DAY	
18-19	VK NOVICE	AR
18-19	SCANDINAVIAN CW	
25-26	SCANDINAVIAN PHONE	
25-26	DELTA QSO PARTY	
October		
2-3	VK/ZL/OCEANIA PHONE	
9-10	VK/ZL/OCEANIA CW	
16-17	JAMBOREE ON THE AIR	
16-17	ARCI QRP CW	
30-31	CQ WW DX PHONE	
November		
13-14	EUROPEAN RTTY	
27-28	CQ WW DX CW	
December		
4 to Jan. 9	1982/1983 ROSS HULL VHF CONTEST	

RESULTS OF THE CQ WW WPX CW CONTEST FOR VK

VK3BLN	All Bands	605514	756273
VK2AYD	All Bands	439593	636231
VK2BQQ	All Bands	361260	469223
VK3AEW/1	All Bands	220096	384181
VK4UA	All Bands	173655	372153
VK3CM	All Bands	73944	255117
VK2DID	All Bands	31906	136086
VK6FS	28 MHz	207364	378188

Results of the SSB contest inadvertently left out

VK4VU 2,832,384, gaining top all band score with 2003 QSOs and 411 prefixes.

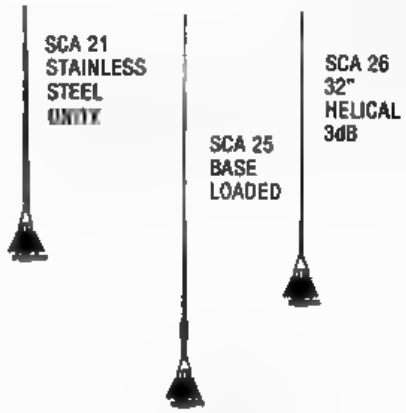
Congratulations on your win.

Apologies are extended from the CQ staff for the omission. ■

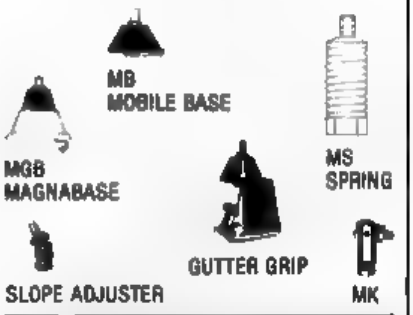
Definitions:

- The size of the cut you inflict on yourself while shaving is directly proportional to the importance of the event for which you are shaving.
- Nothing keeps a family together like having the car in for repair.
- Bigamist: Man who wants to keep two himself.
- Morse code bikini: Two dots and a dash.
- Wrong numbers are never engaged.
- Beehive: Sting ensemble.
- Paediatricians are men of little patients.

2 METRE ANTENNAS

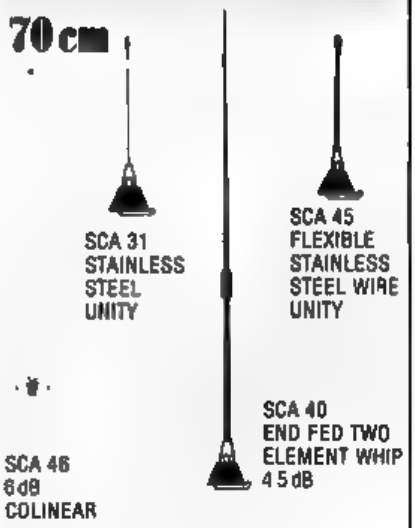


ACCESSORIES



Communicate with SCALAR

70cm



PROFESSIONAL ANTENNAS FOR THE DISCERNING AMATEUR

SCALAR GROUP
20 Shelley Ave.
Kilsyth 3137
VIC. 725 9677
N.S.W. 537 3668
QLD. 44 8024
W.A. 446 9177

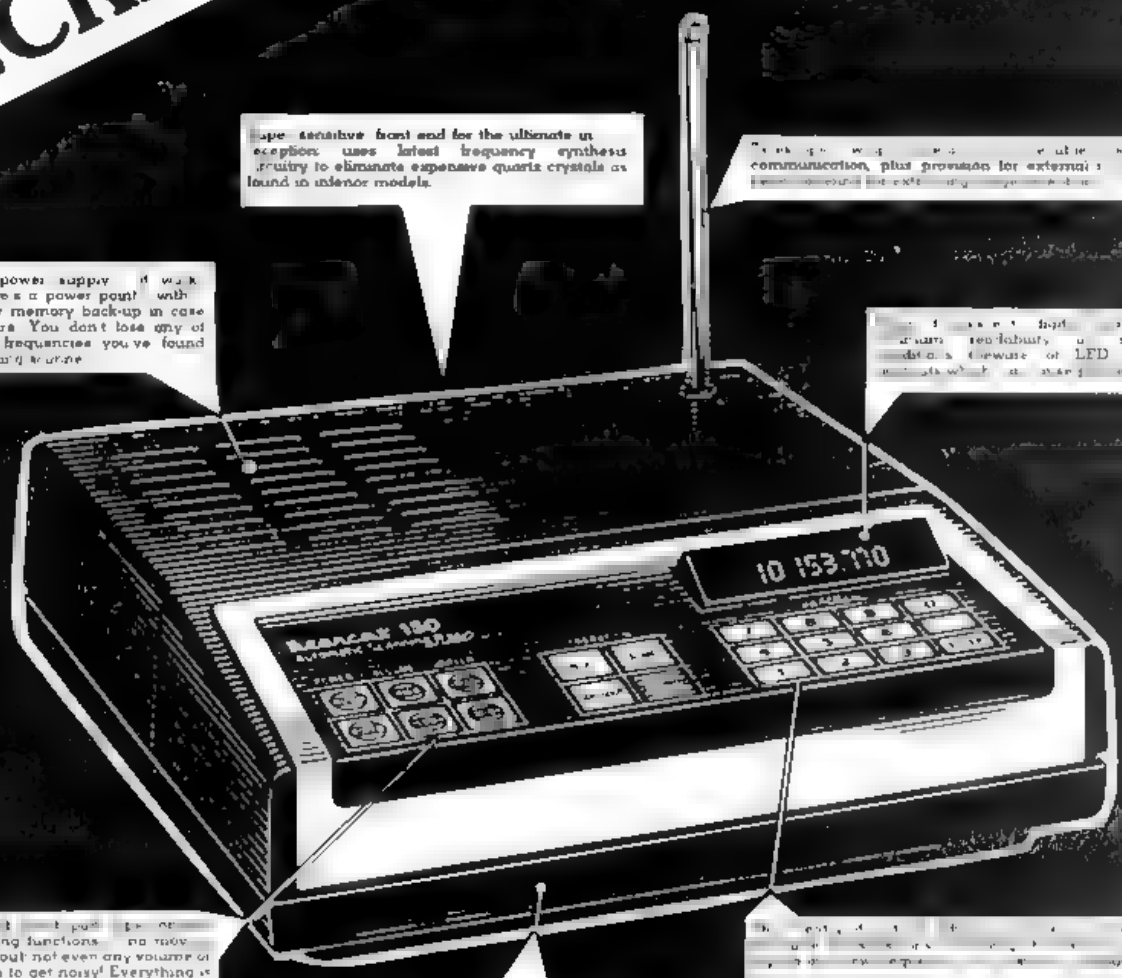
LISTEN IN TO SECRET RADIO

There are literally thousands of radio transmissions every day that you've never had the chance to listen to: simply because there's never been an economic way to listen to them.

NOW there's a way. The new Bearcat 150FB scanner receiver from Dick Smith Electronics!

COVERS THE FOLLOWING 'SECRET' FREQUENCY BANDS

66-88MHz	144-148MHz	148-174MHz	406-470MHz	470-490MHz
Business radio	Amateur radio band	Business radio, low tracks, harbour marine etc.	Amateurs, business radio, police etc.	UHF CB, Taxi, other emerg. services



...ape sensitive front end for the ultimate in reception: uses latest frequency synthesis circuitry to eliminate expensive quartz crystals as found in inferior models.

...communication, plus provision for external ...

...power supply ... work anywhere there's a power point with special battery memory back-up in case of power failure. You don't lose any of the special frequencies you've found ...

...LED ...

...functions ... no more ... to wear out not even any volume or other controls to get noisy! Everything is controlled by touching the keys and each key gives you an answering 'bleep' to ... know it's understood.

...microprocessor integrated circuit ... computer on one chip ... to make child's play of the normally extremely complex controls and functions of the scanner. You'll only take a couple of minutes to learn ... use this incredible device!

AND IT'S UNDER $300.00!

The amazing Bearcat 150FB: Australia's lowest priced synthesised scanner radio receiver. Incredible value for all those interested in listening to stations using the VHF & UHF spectrum - includes amateurs, business, police, fire, ambulance & other emergency services. Imagine - you could be listening to tomorrow's news - today!
Bearcat 150FB Scanner: exclusive to Dick Smith Electronics.
Cat D-2800

ONLY $275.00

DICK SMITH Electronics

● SYDNEY 290 3377 ● TIGHES HILL 61 1896 ● NORTH RYDE 888 3200 ● WOLLONGONG 28 3800 ● TAMWORTH 66 1841 ● FYSHWICK 80 4944 ● MELBOURNE 67 9834 ● GEELONG 78 6363 ● BURANDA 391 6233 ● CHERMSIDE 59 6255 ● ADELAIDE 212 1962 ● PERTH 328 6944 ● HOBART 31 0800

AR SPECIAL

1982 Federal Convention

Compiled by Peter Dodd VK3CIF
Federal Secretary/Manager

Before going into more detail here are a few brief comments about the business conducted —

- *Rules adopted for affiliation of Australia-wide specialist amateur bodies.*
- *Heavy PR, especially for WCY83 and forward planning generally. Membership of WIA an insurance policy. Improve image of amateur radio in the community.*
- *Policy statement confirmed opposition to additional frequencies for Novices.*
- *Seek general approval to link repeaters.*
- *Keep pressing for use of 7.15 to 7.3 MHz and 50-52 MHz band segments.*
- *Encourage members to use WIA logo on QSL cards and MWIA (or AWIA) after their names.*
- *Inter-relationship between WICEN and Third Party traffic handling clarified.*
- *WIA broadcasts on new 10 MHz band not to be encouraged.*
- *WICEN calling frequencies to be established in new band/s.*
- *Federal element in pensioner grade subscriptions to remain the same as for full and associate members*
- *Probable increase by $2 of Federal dues for 1983 to cover increased IARU and printing costs.*
- *Concept of repeaters identifying as beacons not supported.*
- *Seek age reduction from 15 to 14 years to obtain full or limited licence.*
- *Press for phone patch facilities.*
- *ASCII standardisation is to be investigated.*

The WIA 46th Annual Federal Convention was held in Melbourne from 1st to 3rd May, 1982, at the Brighton Savoy Motel. Convention guests included the President of NZART, "Jumbo" Godfrey ZL1HV, Jamie Pye ZL2NN, Overseas Liaison Officer for NZART, also a member of Frequency Spectrum Management Group, and two DOC officers at Executive level in the Frequency Management Branch — Mr C. W Pike and G. W Brain — at a dinner function

Mr. Pike spoke at some length, after the dinner, as well as answering questions. Much of his address related to the vexed question of stickers (or labels) to identify the legitimacy of ownership and significant revenue loss of transmitting equipment, particularly in mobile use, which has been on trial in Tasmania for many months before possible introduction throughout Australia. The honest operators, he said, were having to carry the administrative costs disproportionately — an estimated annual revenue loss exceeding $2,000,000. Amateur objections were that people, not equipment, were licensed, that stickers could lead to the imposition of equipment fees, that amateurs owned varying quantities of transmitters, both fixed and mobile, and hence amateurs had to be regarded as unique The outcome remains inconclusive. Listeners heard with some dismay that the Government planned the greater use of VHF TV channels for increased programme options in country areas since the costs between providing UHF and VHF TV services were about 5 to 1. This change in attitude will necessitate closer vigilance on the proliferation of TV Channels 0 and 5A. Mr. Pike could give no news about the timings when the new Australian Table of Frequency Allocations is to be released or when the proposed new Radio Frequency Management Bill will be introduced in Parliament.

"Jumbo" Godfrey assisted greatly during the Convention by describing experiences across the Tasman with many problems of a similar nature to those in Australia. The development of closer relations with IARU R3 Societies and NZART in particular were seen to be of great importance in the development of amateur radio in this part of the world. Although many amateur problems were similar in the two countries, the solutions, if any, may differ by reason of geographical, political or sociological differences between the two

The delegates at the Convention were: the Federal Councillor and the Alternate Federal Councillor from each Division (VK5 brought a second person as an observer — VK5AMK in place of VK5AWM). Nearly all the members of the Executive were present for most of the time, in addition to David Wardlaw VK3ADW and Michael Owen VK3KI A number of Executive Sub-Committee Co-ordinators attended to answer questions relating to their own particular specialised subjects. The Federal Council elected the Executive for the ensuing year unchanged except that Earl Russell VK3BER replaced Bill Roper VK3ARZ as a member of the Executive. The latter is stepping down for business reasons.

The RD Contest Trophy was again presented back to the VK5 Division, this time by the President of NZART, and a small gift of an Australian book was presented by the Federal President to each of the two Kiwis. Prior to the Convention dinner Bruce Bathols VK3UV launched the new WIA Book, volume 1, during a short function held in the Executive office. At the conclusion of the Convention David Wardlaw VK3ADW spoke about the dedicated work of the Secretary, Peter Dodd VK3CIF, who is retiring in October.

Apart from debating the 40 agenda items and three general business items, the Federal Council conducted the formal statutory business required under the Companies Act, such as the adoption of the accounts for 1981, published elsewhere in this issue, and the adoption of the 16 Annual Executive Reports after much debate The Federal President's report is also published in this issue, but it must be recognised that this year the report was produced under exceptionally difficult conditions because of the IARU Region 3 Conference in Manila being held early in April and the Federal President's own hospitalisation for a large part of the month. The statistics of licensees in this report must be regarded as close approximations this year pending stabilisation of the Department's computer programmes.

As in all recent years there were considerable discussions and explanations arising from IARU matters. The IARU R3 Conference in Manila was adjudged as the most productive of recent conferences — Directors were increased from four to five, including David Rankin 9V1RH/VK3QV taking over the new post of chairman (upon

relinquishing his duties as Secretary in favour of Masayoski Fujioka JM1UXU) of the Board consisting of Jose Gonzalez DU1JMG, Keigo Komuro JA1KAB, Jumbo Godfrey ZL1HV and Michael Owen VK3KI In order to provide for the minimal needs of the Association for at least the ensuing triennium the subscriptions from member societies had to be increased by a factor of at least 4. It was resolved that financial provision had to be made to send regional observers to four ITU conferences in the period to 1986 as these potentially affected the amateur service in this Region Other details of this Conference were included in a Conference Report, which has been sent to Federal Councillors, but it was noted that the WIA delegate abstained from voting on a motion that only narrow band emissions were to be used on the new 10 MHz band since this was inconsistent with current WIA policy. The Conference also resolved that no contest operations should be held on this band and, whilst noting that NZART were pressing for a band extension to 10.2 MHz, it was decided it was a dangerous tactic to adopt a regional policy seeking any extensions, although no restriction was placed on individual societies from making their own proposals to their own administrations.

In relation to the other annual reports these are a few highlights —

- *Federal Intruder Watch Co-ordinator's resignation from the end of 1982.*
- *ITU Regulations relating to harmful interference are complicated and singularly unhelpful to the amateur service in the international context.*
- *Federal Education Co-ordinator congratulated on her work.*
- *Need to obtain and preserve historical material.*
- *New RD contest rules accepted.*
- *John Moyle National Field Day requires extra encouragement.*
- *Work in IARU on standardisation of QSL cards to facilitate bureaux processing.*
- *WAVCKA (VHF) Award must continue.*
- *WAVCKA Award for VKs (new rules) now available*
- *Project Asert Co-ordinator vacancy may now be filled.*
- *Need to make more use of information accumulation on the reception of 10 metre beacons*
- *EMC a complex of technical, legal and social difficulties — need for vigilance on proposed new legislation*
- *Videotapes on VHS format under active consideration*
- *AR advertising now being conducted by office part-timer John Hill VK3DKK.*

A very considerable amount of time was spent by working groups of the Convention producing WIA policy statements on matters of concern and in a form embracing not only the policy but also the reasons why the policy was adopted. A time table was set for additional work to be done on these prior to general publication Examples of this concept may be helpful to an understanding —

"RECOGNISING

— *The singular stance of Australia in permitting voice bandwidth transmissions in the 10 MHz band;*

— *The present narrow width of this band, prior to possible extension (10.15 to 10.20 MHz),*

WHILST ACKNOWLEDGING

— *The possible intra-continental nature of day-time propagation on this band, and*

— *Its potential for improving broadcast services, and*

— *That a demonstrated special local need may arise, and*

— *That any broadcast should be co-ordinated Federally —*

THIS COUNCIL RESOLVES to not encourage the use of the 10 MHz band for Divisional broadcasts or broadcast link purposes."

And here is another example —

"RECOGNISING

— *The ability of the Amateur Radio Radio Service to provide public service through the use of their frequency bands, specialised equipment and knowledge;*

— *The ongoing need to promote the Amateur Radio Service to the general public,*

— *A desire to develop operating skills within the Amateur Radio Service;*

— *The potential for the development of national and international goodwill.*

— *A separate need for emergency networks operating in support of official counter disaster agencies.*

— *the right of amateur radio operators to choose whether or not to be involved in such activity,*

THIS COUNCIL RESOLVES TO

— *Support the use of third party traffic handling privileges on all amateur bands and by all interested amateur radio operators;*

— *Support the existence of networks for facilitating third party traffic handling,*

— *Support the existence of emergency networks operating in support of official counter disaster agencies.*

— *Educate interested members in third party traffic handling techniques, procedures and responsibilities.*

— *Promote co-ordination between third party traffic networks and authorised amateur emergency networks.*

— *Continue to pursue the establishment of third party traffic agreements with other countries."*

This second policy is backed up by definitions which cannot now be published solely due to space considerations in this issue.

This was indeed a productive and busy Convention. Further details will be published in later issues, and possibly will include the Forward Planning policies. The next Federal Convention will be held in Melbourne on 23rd to 25th April, 1983.

ACCOUNTS REPORT

In accordance with the Companies Act 1961 the Executive state the following:—

(a) The names of the Executive in office at the date of this report are.—

P. A. Wolfenden	VK3ZPA
K. C. Seddon	VK3ACS
C. D. H. Scott	VK3BNG
H. L. Hepburn	VK3AFQ
B. R. Bathols	VK3UV
W. J. Roper	VK3ARZ

(b) The principal activity of the Wireless Institute of Australia is to —

1. Represent generally the views of persons connected with amateur radio in the Commonwealth of Australia, its territories and dependencies
2. Promote the co-operation between the Divisions in the encouragement and development of amateur radio
3. Safeguard the interest of the Divisions and the members in relation to frequency allocations, rights and privileges
4. To promote the development, progress and advancement of amateur radio in all matters in relation to amateur radio in general

(c) The surplus of income over expenditure for the year ended 31st December, 1981, was $16,793 compared with $271 for 1980 There is no provision for income tax required as the Company is exempt under Section 103A (2) of the Income Tax Assessment Act.

(d) During the year provisions were increased —

1 Provision for holiday and long service leave was increased by $386 to $12 884

II Provision for superannuation — increased by $1 000 to $9,685.

(e) The Executive have taken reasonable steps, before the Statement of Income and Expenditure and Balance Sheet were made out, to ascertain that action had been taken in relation to the writing off of bad debts and making of provision for doubtful debts and to cause all known bad debts to be written off and adequate provision to be made for doubtful debts

(f) At the date of this report the Executive are not aware of any circumstances which would render the amount written off for bad debts, or the amount of the provision for doubtful debts, inadequate to any substantial extent.

(g) At the date of this report the Executive are not aware of any circumstances which would render the values attributed to current assets in the accounts misleading

(h) At the date of this report no charges exist on the assets of the Institute which has arisen since the end of the financial year and does not secure the liabilities of any other person

(i) There does not exist any contingent liability which has arisen since the end of the financial year

(j) No contingent liability or any other liability has become enforceable within the period of twelve months after the end of the financial year which in the

opinion of the Executive will or may effect the ability of the Institute to meet its obligations when they fall due

(k) Since the end of the previous financial year the Executive have not received or become entitled to receive a benefit by reason of a contract made by the Institute or a related corporation with the Executive or with firms of which they are members or with companies in which they have substantial financial interests

(l) The results of the Institute's operations during the financial year were in the opinion of the Executive not substantially affected by any item, transaction or event of a material and unusual nature There has not arisen in the interval between the end of the financial year and the date of the report any item transaction or event of a material and unusual nature likely in the opinion of the Executive, to effect substantially the results of the Institute's operations for the next succeeding financial year

Dated at Melbourne this 25th day of March, 1982

MEMBERS OF THE EXECUTIVE

(Signed) K. C. SEDDON
(Signed) C. D. H. SCOTT

STATEMENT OF INCOME AND EXPENDITURE FOR YEAR 31st DECEMBER, 1981

Income:	1981	1980
Members Subscriptions	$133,006	$112,731
Interest Received	10,650	7,654
Surplus — Magpubs/Book Sales	15,065	9,963
Donation — WARC/Other	24	261
	158,845	130,609
Expenditure		
Amateur Radio (Note 1)	61,332	63,237
AMSAT	436	
Add'l Fees — 1981	900	
— 1979/80	300	518
Award Payments	230	200
Bank Fees	240	10
Bad Debts	496	
Committee Expenses	1,092	261
Convention Expenses	6,256	5,529
Depreciation	1,147	552
Electricity	729	564
EDP Expenses	4,950	4,000
General Expenses	426	130
Holiday Pay and Long Service Leave Provision	386	7,306
Insurance	970	703
IARU Dues	821	
Licences and Fees	40	220
Membership Recruiting	6,747	1,477
Postage and Freight	5,143	3,895
Printing and Stationery	2,803	4,061
Rent and Rates	3,471	4,143
Repairs and Maintenance	660	174
Satellites and Special Projects	—	189
Salaries and Secretarial	36,608	30,234
Superannuation	1,000	1,000
Telephone	1,070	936
Travelling Expenses	1,707	999
	142,152	130,338
Net Surplus	**16,793**	**271**
Accumulated Funds Brought Forward	38,105	37,834
Add ARU Fund Brought Forward	1,029	
	$55,927	$38,105

NOTES TO AND FORMING PART OF THE ACCOUNTS
AMATEUR RADIO (Note 1)

Income:	1981	1980
Advertising	$26,454	$24,519
Subscriptions and Sales	2,054	2,421
Inserts and Sundries	2,725	1,896
	31,233	28,836
Expenditure		
Awards	256	90
Debt Collection	43	297
Postage	13,175	15,252
Publishing Costs	65,391	61,411
Salaries	11,573	14,118
Travelling Expenses	2,118	905
	$92,555	$92,073
Excess Expenditure Transferred to General Account Representing Cost of AR to Members	**$61,322**	**$63,237**
RON WILKINSON ACHIEVEMENT AWARD (Note 2)		
Balance Brought Forward	$1,273	$1,213
Add Interest	160	110
	1,433	1,323
Less Award Payment	50	50
	$1,383	$1,273

BALANCE SHEET AS AT 31st DECEMBER, 1981

	1981	1980
Members' Funds:		
Accumulated Funds	$55,927	$38,105
Add ITU/WARC	533	533
IARU Fund	—	1,029
	56,460	39,667
Special Fund — Ron Wilkinson Achievement Award (Note 2)	1,383	1,273
	$57,843	$40,940
Represented by —		
Current Assets:		
Cash on Hand	41	115
Commonwealth Trading Bank	14,585	4,895
Short Term Deposits	40,362	—
Australian Savings Bonds	10,000	10,000
Australian Resources Development Bank	8,000	8,000
R.E.S.I. Building Society	922	40,223
Sundry Debtors — Less Provision for Doubtful Debts ($2,000)	11,931	17,413
Stock on Hand — At Cost	9,206	7,767
Prepayments	626	—
	95,693	88,403
Non-Current Assets.		
Furniture and Fittings — At Cost		
Less Provision for Depreciation	6,506	2,207
	102,199	90,610
Deduct Current Liabilities.		
Sundry Creditors	900	6,590
Subscriptions in Advance	17,415	20,431
Provisions —		
Superannuation	9,685	6,879
Amateur Satellites	2,972	2,972
Holiday and Long Service Leave	12,884	12,498
Deposit VK4	500	300
	44,356	49,670
	$57,843	$40,940

EXECUTIVE STATEMENT

In our opinion

(a) The Statement of Income and Expenditure is drawn up so as to give a true and fair view of the surplus of the Institute for the financial year ended 31st December, 1981

(b) The Balance Sheet is drawn up so as to give a true and fair view of the state of affairs of the Institute as at the end of the financial year

MEMBERS OF THE EXECUTIVE

(Signed) K. C. SEDDON
(Signed) C. D. H. SCOTT

STATEMENT OF PRINCIPAL ACCOUNTING OFFICER

To the best of my knowledge and belief the accounts for the year ended 31st December, 1981, give a true and fair view of the matters contained in Section 162 of the Companies Act 1961, and required to be dealt with in the accounts as presented

PRINCIPAL ACCOUNTING OFFICER
(Signed) P. B. Dodd

AUDITORS' REPORT TO THE MEMBERS OF THE WIRELESS INSTITUTE OF AUSTRALIA

1. In our opinion, the accompanying accounts, which have been prepared under the historical cost convention, are properly drawn up in accordance with the provisions of the Companies Act and so as to give a true and fair view of:—

   (a) 1. The results of the Institute for the year ended 31st December, 1981, and the state of its affairs at that date

   2. The matters required by the Companies Act to be dealt with in the account.

   (b) The accounting records and other records and registers, required by the Act to be kept by the Company, have been properly kept in accordance with the provisions of that Act.

HEBARD & GUNNING,
Chartered Accountants
Melbourne (Signed) P. W. HEBARD
25th March, 1982.

REPORT OF EXECUTIVE

It is with pleasure that I present this Report of the Executive for the year 1981-82.

The Federal administration arm of our Institute has again had a very busy and demanding twelve months albeit in the ambience of a levelling out in amateur population and Institute membership

1. MEMBERSHIP

1.1 Membership of our Institute has grown during the past twelve months, 7,879 in 1980 to 8,074 in 1981 (see Table 6).

1.2 However, as predicted in last year's report, official DOC statistics this years are a little difficult to interpret due to a number of factors.

1.3 Official licence figures show a decrease in the total amateur population from 14,906 in 1980 to 14,750 for 1981 (see Table 5)

1.4 This is partially explained by the K call absorbing some limited and novice licences

1.5 However, it is suspected that not all DOC figures are up to date, particularly for NSW.

1.6 Table 5 indicates an 11 per cent reduction in total licences in that state — a reversal on previous years where significant growth has been achieved. Last year approximately 20 per cent.

1.7 We are attempting to confirm these statistics at the time of preparing this Report.

1.8 *Marketing Campaign.* A national Marketing Campaign was launched in November 1981, during which a copy of Amateur Radio magazine, together with a brochure about the WIA, was posted to every known licensed amateur. This was further supported by Sunday morning broadcasts.

Some Divisions derived greater benefits than others from the campaign and the overall result is still difficult to determine. However, in the short term it is considered that a better result could have been obtained if we had allowed more time for planning and implementation of the campaign.

2. FREQUENCY ALLOCATIONS

2.1 *30m Band.* The new 30m ("WARC") band 10.1-10.15 was made available to Australian amateurs on a secondary basis from 1/1/82. At the time of preparing this Report only a few administrations have made the band available to their amateurs.

2.2 Australia is one of the very few countries permitting phone operation — most restrict operation to narrow band — CW or RTTY — transmissions.

2.3 *6m Band.* The apparent excessive duration of test pattern transmissions by SSB Channel 0 stations, thus unreasonably restricting amateur use of 52-54 MHz, has been discussed with DOC both at State (NSW) and national levels.

2.4 Methods of re-opening at least part of the 50-52 MHz band to the amateur service have been continually explored, particularly in relation to the Australian Frequency Table, which proposes 50-52 MHz be allocated to the amateur service on a secondary basis.

3. LICENSING

3.1 *Licence Fees* were again increased during the past year. Full and Limited licences were increased from $15 to $17 and Novices from $10 to $14.

3.2 Like so many Government charges the increases were somewhat greater than CPI or inflation rates — a trend which is being monitored carefully.

3.3 *A New Emission* designation system, as a result of WARC 79, came into force on the 1st January, 1982. Details were published in AR of September 1981, page 26.

3.4 *"Sticker Licensing"*, perhaps the year's most contentious issue, envisaged the attachment of identification stickers to ALL transmitters and was initiated on a trial basis in Tasmania by DOC, without the prior knowledge of the Institute. Each piece of transmitting equipment was to be allocated a serial number and a register appears to have been proposed.

3.5 The Institute is opposed to such a scheme if for no other reason than in the amateur service the person is licensed and not the equipment!

3.6 At the time of preparing this report, it is understood that a hiatus exists together with a strong possibility that the amateur service may be finally exempt from any such scheme.

4. REPRESENTATION TO THE DEPARTMENT OF COMMUNICATIONS

4.1 Regular formal joint WIA/DOC meetings have been held during the year, these were of course in addition to numerous contacts with DOC officers over specific issues.

4.2 *Non-Examinable Sections of the "Handbook"* have been largely resolved, though a few items remain in abeyance.

4.3 *Examination Statistics* have been made available to the Institute's Education Officer and have been of assistance.

4.4 *Procedures for Visitors/Reciprocal* licences issuing and acceptable certification of licences, particularly with respect to speeding up the present system. Simplifying administrative procedures has been discussed but not yet finalised.

4.5 *Third Party* traffic privileges with the USA is on the way to being finalised.

4.5.1 In addition the PNG Administration has expressed some interest.

4.5.2 During the year, Australia approached the Brazilian authorities for an ad hoc third party arrangement — particularly for use during the Sydney-Rio Yacht Race. Brazil refused to enter an agreement.

4.6 *Portable Repeaters*, for use under certain conditions, was approved.

4.7 Other matters under consideration included:—

4.7.1 Morse credits — carry over

4.7.2 Club — station — use.

4.7.3 Log Keeping — now mandatory.

4.7.4 "C" Calls — use

4.7.5 28 MHz Beacon band planning.

4.7.6 Duration of (SBS) Channel 0 Test Transmissions — interference to amateur service.

4.7.7 Prosecutions reporting — for AR magazine and general publicity.

4.7.8 Phone Patch.

4.7.9 Multiple Call Signs.

4.7.10 AX Prefix — for special events

4.7.11 Abbreviated Call Signs — especially for WICEN operation

4.7.12 New Legislation — new Act.

4.7.13 Interference — EMC.

4.7.14 Amateur Advisory Committee

4.7.15 Repeater Linking.

4.7.16 Primary Services in 70 cm Band (dredges QLD)

5. FORMAL SUBMISSIONS

5.1 A formal submission was made to the Cable and Subscription TV Inquiry. This was prepared from material supplied by our EMC Co-ordinator and FTAC and was a follow-up to a brief submission made in October 1980.

5.2 A submission was made to the Australia Post Inquiry.

6. SPECIALIST AND ADVISORY COMMITTEES

Details of the activities of the various specialist committees will be found in their annual reports to this Convention. However, the following are worth noting:—

6.1 *EMC.* During the year the EMC Advisory Service completed its first full year under Co-ordinator Tony Tregale VK3QQ. Not only has the service been of great assistance to individual amateurs in their "hour of need", but it has also helped greatly in supplying detailed information to assist Executive.

6.2 *Intruder Watch.* During the year Graeme Fuller VK3NXI resigned as Intruder Watch Co-ordinator. We sincerely thank him for his work in this area.

6.2.1 Bob McKernan VK4LG took over and has been most active.

6.2.2 During the year a concerted effort was made to ease the OTHR problem. The Institute published a special article in AR (May 1981), and followed up with a carefully worded letter to the Minister of P. and T., as did many individual amateurs.

6.2.3 Concern has been expressed at an apparent philosophy emerging in Ministerial replies, which included reference to the amateur service as being "frequency agile" and thus not requiring protection from harmful interference and so would be subject to different treatment. This philosophy the Institute rejects.

6.3 *AMSAT-Australia.* Another change during the year involved Charlie Robinson VK3ACR taking over from Dave Hull VK3ZDH as AMSAT-Australia Co-ordinator. Our sincere thanks to both he and Bob Arnold VK3ZBB — the latter is not fading from the scene and is still very much involved in satellite work. With the aid of his well equipped station, Charlie has been able to

keep in regular direct contact with International AMSAT nets, as well as the weekly Australian net.

6.4 *Education Co-ordinator* Brenda Edmonds VK3KT was appointed Federal Education Co-ordinator at last year's Convention and deserves the support of us all for the concerted efforts she has made in this important portfolio.

Progress is certainly being made in areas such as —

Regular notes in AR magazines, Liaison with DOC and sample exam papers to name but a few

But like so many Institute responsibilities she needs continuous support and feedback, especially from those involved with running licence classes

6.5 Other Committee changes during the year included: Federal Contest Manager — Wally Watkins VK2DEW to Reg Dwyer VK1BR. Federal Awards Manager — Bill Verrall VK5WV to Mike Bazley VK6HD.

6.6 *Amateur Radio Magazine.* Amateur Radio magazine, our official journal, has continued at a high standard under the Publications Committee and the Editor, Bruce Bathols

In this era of commercialisation it is perhaps a little difficult for many of us to comprehend the fact that so much editorial and associated work is still being done on our behalf by unpaid volunteers.

One major change during the year has been to let out the final production work to Betken Productions, an outside contractor, instead of this work being carried out by office staff. This change has only recently taken place and results to date are very encouraging.

7. IARU AND POST WARC

7.1 David Wardlaw and Michael Owen have continued their deep involvement in these areas.

7.2 The Importance of CCIR to the amateur service — a subject of a paper to be considered at the IARU Region 3 Conference held in Manila during the first week of April

7.3 Other papers proposed by the Institute for the Conference are:—

Non-ionizing Radiation and the Radio Amateur, an information paper by Jim Lloyd VK1CDR

7.4 Radio Frequency Interference — WIA Approach, an information paper by Tony Tregale VK3QQ.

7.5 Visitor's Licences for Amateurs.

7.6 WCY 1983.

7.7 Novice Licensing in Australia.

7.8 General status report on amateur radio and the WIA.

7.9 Michael Owen, as a Director of IARU, has prepared his Director's Report and another paper dealing with the Review of the International Amateur Radio Union Constitution, which includes the broad policies adopted by the Federal Council at last year's Federal Convention.

7.10 The Conference will be hosted by the Philippines Amateur Radio Association, PARA, and will be attended by IARU Liaison Officer David Wardlaw, with Federal President Peter Wolfenden as second Michael Owen will be in attendance, not as an Australian Delegate, but as a Region 3 Director.

7.11 *NZART Exchange Visit.* On invitation from NZART, the WIA attended the NZART Conference in Auckland last year The WIA was represented by Michael Owen and David Wardlaw.

This year the Institute has invited representatives of the NZART to attend this Federal Convention.

8. MISCELLANEOUS

In the past I have used this section of the Report to reflect on a few personal views. This year I raise only one issue, for I believe that it is paramount that we now address ourselves to it.

Public Relations. Now possibly more than ever before we need to address ourselves to the need for co-ordinated public relations, not only orientated towards the Institute but amateur radio itself. There are four main reasons for this need:

1. The accelerated growth rate, both in the amateur population and Institute membership, due to the CB boom and novice licensing, which appears to have reached its peak;
2. The current economic climate is such that individuals are constrained in their spending habits, especially where less apparent tangible benefits are involved such as membership and representation,
3. World Communication Year is scheduled for next year and amateur radio must be involved if we wish to retain a public profile,
4. 1985 is the 75th anniversary of the Institute

At the very least, standard publicity packages are required — perhaps including posters, information and advice for those clubs and individuals wishing to promote amateur radio in their district.

But more properly, an overall strategy is needed with an appropriate group being responsible.

9. EXECUTIVE

9.1 The Executive for 1980/81 was elected as follows:—

Peter Wolfenden VK3KAU
Federal President, Chairman

Bruce Bathols VK3UV
Executive Vice Chairman, Editor AR

Courtney Scott VK3BNG
Hon. Treasurer and Chairman Finance Sub-Committee

Harold Hepburn VK3AFQ
DOC Negotiations and Intruder Watch

Ken Seddon VK3ACS
EMC and Contests

B II Roper VK3ARZ
Member

9.2 Whilst not members of Executive, David Wardlaw VK3ADW, Michael Owen VK3KI and Bill Rice VK3ABP attended Executive meetings and were of great assistance during the year

9.3 A number of others also attended Executive meetings during the year and details are shown in Appendix 2

9.4 Many other people assist in the operation of the Institute, many in specialist capacities sharing the considerable workload with the Executive:—

IARU and R3 Liaison Officers
Mr. M. Owen VK3KI
Dr. D. Wardlaw VK3ADW

AMSAT-Australia
Mr. C. Robinson VK3ACR

Federal Intruder Watch Co-ord.
Mr. R. McKernan VK4LG

Fed Technical Advisory Committee
Mr. W. Rice VK3ABP

Federal Education Co-ord.
Mrs. B. Edmonds VK3KT

Federal Historical Officer
Mr. G. M. Hull VK3ZS

Federal Contest Manager
Mr. R. Dwyer VK1BR

VK/ZL Contest Manager
Mr. N. Penfold VK6NE

Federal QSL Manager
Mr. N. Penfold VK6NE

Federal Awards Manager
Mr. M. Bazley VK6HD

Federal EMC Co-ordinator
Mr. A. Tregale VK3QQ

Federal WICEN Co-ordinator
Mr. R Henderson VK1RH

Federal Video Tape Co-ordinator
Mr. J. Ingham VK5KG

Ch. Fed Finance Sub-Committee
Mr. C. Scott VK3BNG

Chairman Publications Committee
Mr B. Bathols VK3UV

9.5 There are, of course, many others not listed here who serve the Institute People like John Hackworth VK5QZ, Records Claims Invigilator, Ron Fisher VK3OM and Bill Roper VK3ARZ, Broadcast Tapes, and the members of the various specialist Committees, all of whom contribute greatly.

On behalf of WIA members and the Executive, I thank them all

9.6 *Federal Councillors' Handbook.* During the year Ron Henderson VK1RH prepared a draft for the Federal Councillor's Handbook.

We thank Ron for his valuable work to date.

10. OFFICE AND STAFF

10.1 The workload on the office continues to grow with increased membership.

10.2 Running the risk of repeating part of last year's report, it is essential that we maintain an efficient central nucleus for the operation of our dispersed Institute, which relies so heavily on volunteers spread right across Australia.

10.3 Because of membership growth and because individuals are less prepared to volunteer their time these days, more and more work is having to be done by paid staff.

10.4 We must bear this in mind as we consider the future plans for our organisation. Salaries and associated costs are a major consideration.

10.5 I would like to personally thank our hard working employees and also those contractors who have contributed to the operation of the Institute during the year.

10.6 Present staff are:—
Mr. P. B. Dodd, Secretary/Manager.
Mr. C. W. Perry,* Membership Records/EDP.
Mrs. A. McCurdy,* Secretarial and general duties.
Mr. J. Hill,* AR Advertising.
* Part time.
Retirement. It is anticipated that both Mr. P. Dodd and Mr. W. Perry will be retiring during October this year, as a result of the retirement policy established during the year.

10.7 In conclusion, I would like to thank all officers of the Institute who gave so readily of their time during this last year. I would also like to thank the many individual amateurs who have offered assistance and guidance during the year. They have, I believe, all contributed to the state of the art of amateur radio in Australia.

(Signed) P. A. WOLFENDEN VK3KAU
Federal President.

APPENDIX 2

Attendance at Executive Meetings from 21st May, 1981 to 26th March 1982, inclusive

	Attended	Maximum
Mr P. Wolfenden	14	14
Mr B. Bathols	13	14
Mr H. Hepburn	8	14
Mr W. Roper	9	14
Mr C. Scott	12	14
Mr K. Seddon	6	6
Mr Seddon was on extended leave in USA.		
Mr M. Owen	4	
Dr D. Wardlaw	9	

Also attended Messrs. P. B. Dodd 14/14, W. Rice 13, E. Russell 2, J. O'Shannassy 1, M. Thorn 1, L. G. Baly 3, T. Pitman 2, B. Edmonds 1, T. Tregale 1, D. Rankin 1, J. Aarsse 1.

Appendix 1

Membership Statistics. These have been compiled on the same basis as in previous years. It should be noted that DOC statistics refer to licences issued (subject to re-check), whereas WIA statistics refer to the number of individual amateurs. All statistics are for 31st December, 1981 (previous year in brackets, same date).

TABLE 1

	*Total Licences DOC		WIA Licensees		% members to total licensees		Other WIA members		Total WIA members	
VK1	352	(308)	178	(160)	51	(52)	40	(39)	218	(199)
VK2	4289	(4806)	1988	(1905)	46	(40)	210	(198)	2198	(2103)
VK3	4592	(4292)	1971	(1995)	43	(46)	252	(321)	2223	(2316)
VK4	2137	(2129)	1150	(1043)	54	(49)	102	(137)	1252	(1180)
VK5/8	1732	(1809)	1002	(983)	58	(53)	134	(160)	1136	(1123)
VK6	1182	(1088)	652	(552)	55	(51)	76	(97)	728	(649)
VK7	466	(436)	278	(254)	60	(58)	41	(55)	319	(309)
Other	—	(38)	—	(—)	—	(—)	—	(—)	—	(—)
Totals	14750	(14906)	7219	(6872)	49	(46)	855	(1007)	8074	(7879)

* These have been corrected but may still be provisional to some extent.

TABLE 2. Number of Clubs included in above were 106 (103):—

VK1 — 3 VK2 — 20 VK3 — 30 VK4 — 29
VK5 — 12 VK6 — 11 VK7 — 1 (commercial)

TABLE 3. Number of WIA members shown as holding two calls signs 210 (446):—

VK1 — 5 VK2 — 76 VK3 — 72 VK4 — 21
VK5 — 12 VK6 — 14 VK7 — 10

TABLE 4. Percentage increases/decreases (31/12/81 compared with 31/12/80):—

	DOC Licences %	WIA Licensees %	Total WIA Members %
VK1	+ 14	+ 11	+ 10
VK2	— 11	+ 4	+ 5
VK3	+ 7	— 1	— 4
VK4	0	+ 10	+ 6
VK5	— 4	+ 4	+ 1
VK6	+ 9	+ 15	+ 12
VK7	+ 7	+ 9	+ 3
Totals	— 1	+ 5	+ 2

TABLE 5. DOC — Licences by grades 31/12/80 to 31/12/81:—*

	Full		Limited		Novice		Combined	Totals		%
VK1	201	(178)	73	(46)	69	(84)	9	352	(308)	+14
VK2	2296	(2398)	806	(1104)	1030	(1304)	156	4289	(4806)	—11
VK3†	2079	(1919)	1257	(1276)	1095	(1095)	161	4592	(4292)	+ 7
VK4	1098	(827)	301	(566)	589	(716)	149	2137	(2129)	
VK5	927	(840)	276	(360)	435	(569)	94	1732	(1809)	— 4
VK6	674	(556)	196	(272)	265	(260)	47	1182	(1088)	+ 9
VK7†	258	(222)	99	(114)	83	(100)	26	466	(436)	+ 7
Other									(38)	—
Totals	7533	(6938)	3010	(3782)	3566	(4148)	641	14750	(14906)	— 1

* Best regarded as provisional, especially VK2 and VK5
† Manual not computer figures.

TABLE 6. WIA members by grade:—

	F/C	A/T	S	G	L	X (Fem.)	Clubs	Total
VK1	173	38	—	—	1	3	3	218
VK2	1723	162	42	217	11	22	20	2197
VK3	1594	209	73	184	9	16	30	2215
VK4	1022	89	8	77	7	22	29	1252
VK5	881	110	23	95	5	9	12	1136
VK6	577	84	22	40	5	9	11	728
VK7	252	34	5	16	6	3	1	319
Federal	—	—	—	—	9	—	—	9
Totals	6322	706	171	632	53	84	106	8074

A woman marries a man with the ridiculous belief that she can change him, a man marries a woman with the naive idea that she will continue to be the same.

Wife, dragging sleepy husband from bed: "You know the rules — this is a no-parking, tow-away zone from 7 a.m. to 9 p.m."

Contrary to the old belief, oil seems to be one of the principal causes of troubled waters.

WICEN NEWS

WICEN MATTERS FROM THE 1982 WIA FEDERAL CONVENTION

R G Henderson VK1RH
171 Kingsford Smith Drive, Melba, ACT 2615

The report of the Federal WICEN Co-ordinator was adopted without comment. It identified firstly the four levels of amateur involvement in emergency and disaster communications, i.e.:—

As an active member of the SES,

As an active member of WICEN;

As an active member of a Third Party Traffic Network (TPTN),

As an involved and responsible operator

Secondly it established that WICEN was activated by the disaster control agency to supplement their communications whereas TPTNs operate all year round and provide a message service for the general public within the terms of prevailing regulations and licences

A motion for the preparation of WIA policy statements was carried The list of 17 topics included WICEN and third party networks and the statements are to be agreed and issued by 30th September, 1982. A draft of the policy statement on WICEN should go to Divisions for comment in June 1982

FREQUENCIES

A motion to establish WICEN frequencies in the new HF bands was carried with the following motion arising —

"In view of the need for known calling frequencies in emergencies and the desire to facilitate Australian emergency communications this Council resolves in the light of ITU Resolution 640 to establish WICEN calling frequencies in the new HF bands (10, 18 and 24 MHz)."

This was carried so it is now up to me to recommend suitable frequencies, initially only for the 10 MHz band NSW, in proposing the first motion, suggested 10.115 MHz on the boundary between narrow and broadband modes in the WIA's "gentlemen's agreement band plan" **What is your view on this recommendation.**

WICEN/TPTN

A motion calling for definitions for WICEN and TPTNs gave rise to statements along the following lines

WICEN is a pool of trained licensed operators, with equipment, available for deployment by a disaster control agency to aid communications in an emergency

TPTNs are composed of amateur operators providing communications for the general public within the terms of prevailing regulations and licences.

This gave rise to a further motion calling for the establishing of increased co-ordination between WICEN and TPTNs. To that end, these notes, policy statements and other articles in AR will all work towards that aim. See also my WICEN column in AR December 1981.

CALL SIGNS

The last WICEN related motion called for discussion on WICEN call signs. You may be aware that the call suffix series WIA-WIZ is reserved for amateur emergency stations, with the exception that in Queensland a number of regular WIA club stations have already been allotted call signs in that series. In some States the WIA-WIZ suffix series are allocated at minimal cost via the WICEN organisation to WICEN State, regional and local co-ordinators for use in lieu of their normal licensed call sign in emergency situations and for training The long term aim is to obtain this facility in all States without disadvantaging the existing VK4 club stations. ■

Queensland WICEN Emergency Exercise

On the weekend of 22nd/23rd May, 1982, a Regional State Emergency Services exercise was held when a simulated air liner crashed in dense bushland in the hinterland mountains around the Gold Coast with some 100 passengers.

Gold Coast WICEN participated and provided hand-held communications from the search parties back to field base.

Some 250 personnel were involved in the 24-hour exercise, the main object of the exercise was to check the call-out procedure of the various units and co-operation between them in a major disaster

Equipment used by WICEN was as follows Four Icom IC2A hand-helds, one Icom IC730 as HF base back to civilisation, one Icom IC25A 2 metre 25 watt mobile into an isopole antenna, one Kenwood UHF transceiver giving back-up on 433.500 MHz, portable generator with battery back-up.

The field base station was fitted into a console protruding from the rear of a Cortina Hatchback wagon with an aluminium framed annexe to give tent cover during the cold night.

Amateurs participating were VK4KD, VK4AV, VK4APC, VK4KAK, VK4NNE, VK4ZIA.

Ken Ayers VK4KD,
State WICEN Co-ordinator, WIA
(Queensland Division). ■

Car Rally with WICEN Assistance

Don Marshall VK4AMA
23 Karowara St., The Gap 4061

A bank of six lights pierces the night's black. A screaming engine breaks the silence. A car shudders over a metal grid and roars to a stop in a cloud of dust 100m along the bush road.

The instant the car hit the grid a button was pushed on an electronic clock.

Now the time is being passed to the car crew In but a few minutes, the time calculation will be received many kilometres away for feeding into a computer.

Shortly, officials and backup crews there will be cheering or downcast.

What possible link can there be between this frenzied activity and amateur radio?

Many operators in south-east Queensland will recognise this as a summary of the basis of their major Wireless Institute Civil Emergency Net exercise of the year.

Still confused? A quick listen on 3.605MHz on the night of Saturday, May 1, or the morning of Sunday, May 2, recently would have explained all

Queensland WICEN provided the essential communications for the 1982 Australian car rally championship first round.

This was the fourth year amateur operators have worked in conjunction with the Brisbane Sporting Car Club, organisers of the Lutwyche Shopping Village Rally, Queensland's premier rally of the year

As the rally has grown, demands on amateurs have expanded and this year proved to be the greatest test so far.

Success can be gauged from competitors and car club organisers who state that, as a result of amateur participation, the Lutwyche rally is the best organised and most efficient of any in Australia.

Station of Miles VK4KBW, near Gympie, during the exercise.

Car rallying is an exacting "sport" requiring all the skills of a driver/navigator team to get their car through competitive stages on closed roads against the clock.

These stages are held well away from populated areas, usually in state forests, with transport sections on public roads.

The Lutwyche rally starts about midday and ends about 8 the next morning.

Anything can happen over that time and often does. Breakdowns are common. More than half the field of 84 was forced to retire this year

Fortunately, serious accidents are rare.

Sudden changes in the weather can force officials to cancel some sections and re-route others from the basic forest access tracks.

Regardless, competitive section times must get to the rally scorer quickly for a next-to-spontaneous reaction, not a result after three or four days of laborious calculation. Hence a computer.

Demands then on amateur operators are many fold as they would be in a civil emergency — setting up equipment and establishing communication links in strange places, dealing with strangers, preparing, transmitting and receiving official messages quickly yet accurately, operating often on emergency power for extended periods plus providing their shelter and sustenance.

Queensland WICEN region 4 based on Brisbane has been allocated a secondary net function by the State Emergency Service — for Red Cross and Salvation Army welfare messages.

Thus the transmission of complicated tables of rally section numbers, car numbers and times in minutes and seconds is seen as a valuable test of preparedness recognised by the SES which lends equipment and by the Communications Department which allows the use of a portable 2 m repeater and third party traffic.

This year, about 40 operators took part. Region co-ordinator John Aarsse VK4QA, Geoff Adcock VK4AG and Fred Saunders VK4AFJ did the organising on paper, in maps and in practice.

Preliminary discussion nights using the secret rally route details and control site pictures changed the net pattern of previous years to the use of the emergency frequency of 3.605MHz generally with 2 m and 70 cm for operation closer to the rally headquarters. The 10m WICEN frequency of 28.310MHz was not

The township of Imbil, south of Gympie, was again chosen as rally HQ, unfortunately not for its radio location tucked in behind mountains of the Kenilworth and Imbil state forest areas.

This disadvantage was again overcome by the setting up of a base station on the top of nearby Mt Borumba. This monitoring and repeating if necessary of all the amateur frequencies used, as well as the rally organiser's own commercial base station, and monitoring of 27MHz CB used by a four-wheel drive club's sweep vehicles.

In all, 12 stations were required, each manned by two or more amateurs.

Organisers chose a quarry on the side of Mt Coot-tha in Brisbane as their first competitive stage — fine except this is on the wrong side of the mountain for communication with Imbil 120 km away.

An intruder on the Brisbane 2m repeater (Channel 7000) forced a last minute change to 7.050MHz transmit-2m receive for the team on the mountain to relay via Mt Borumba.

Eighty metres had proved very noisy in the middle of the day

Then catastrophe! Officials at the quarry checkpoint did not want to know anything about amateur operators or the plan to send scores to Imbil! And this with 16 competitive states up to 50 km to follow over the next 19 hours.

The crunch came for Graham VK4KGS, the author, and his three children at Beerburrum forest, still 55 km from Imbil away over one of the highest points in the Sunshine Coast hinterland.

A 3.5 dipole strung between a couple of trees allowed Graham's FT100 (on generator power) to put a 5 and 9 signal into Imbil.

Co-operative officials here realised our predicament and quickly coerced navigators to provide times for Mt Coot-tha plus the three scheduled sections in Beerburrum forest on special radio checkpoint forms for entering on a scores message form ready for transmission.

Imagine the task of sending four section times of each of 84 cars arriving at the checkpoint at one minute intervals.

Pens and staplers came to the fore and Graham sent a steady stream of details 10 to a message into Imbil ignoring the dust from the road 20 m away and growing hordes of mosquitoes as dusk approached.

When the last car passed at 6.05 p.m., there was a backlog of about 20 minutes but the stage had been set for a long night.

Graham's and my task was not over. While other operators began sending more details of other sections 120 km away, we dismantled our station and were on the move in two vehicles to another spot on the map at Mitchell Creek, a mere 10 km from Imbil but over the range.

Graham VK4KGS operating portable from Mitchell Creek at 3 a.m.

At Imbil, Fred Saunders VK4AFJ organised the control centre with extra operators from Gympie Amateur Radio Club given immediate tuition and experience in handling messages, log keeping etc.

Queensland WICEN co-ordinator Ken Ayers VK4KD observed the operation here also.

Fred reported excellent copy on 3.5 where requests to interfering stations to QSY were heeded.

The WICEN repeater on 147.750MHz set up by Geoff VK4AG and others on Mt Borumba worked excellently and shared traffic with the 80m network, while Channel 6550 was a useful backup.

Imbil had some difficulty with a UHF link because of the surrounding hills.

Graham and I and children found one level patch to pitch our tent and went to sleep about 11 after a dinner eaten to the babble of details from at least four other stations set up like ours somewhere in the forest in the night.

The alarm at 1.45 a.m. was a very rude awakening but we managed to switch on again as rally officials arrived in their van to set up their control point.

The first car arrived at 2.30 and details of the first five were transmitted at 2.48 via the 2m repeater using the transceiver in Graham's truck this time.

Imbil advised details of the leading six competitors and these were passed to later drivers as their navigators calculated our section times.

The last car passed at 5.15 as dawn was breaking and sleep came easily after a total of 49 outgoing messages, nine incoming plus innumberable unofficial comments from our two locations.

The bright sweep car team that work us at 6.50 a.m. received a very chilly reception and moved on quickly

Breakfast in the bright sunshine on a cool, crisp morning was refreshing if we were more than a little jaded. This was our first car rally without rain.

The radio was on again, this time with details of the final sections somewhere over the mountains.

Almost with relief did it go off as the Borumba and Imbil stations closed after 21 hours with the long drive to Brisbane to follow.

A post mortem meeting on May 17 considered problems with rally and WICEN organisers.

While the operation generally was most successful, questions were raised about superfluous talk, superfluous gear, preparedness without advance warning such as this rally, and of equipment like generators and portable masts, flys etc which were borrowed.

Construction of generators could be a useful WICEN project, while the regional co-ordinator is planning an exercise without warning for most participants later this year

YAESU FT-102
HF ALL MODE TRANSCEIVER

IF Transmit Monitor
An extra product detector allows audio monitoring of the transmitter IF signal which enables precise setting of the speech processor and transmit audio so that the operator knows exactly what signal is being put on the air in all modes. A new "peak hold" system is incorporated into the ALC metering circuit to further take the guess-work out of transmitter adjustment.

New VFO Design
Using a new IC module developed especially for Yaesu the VFO exhibits exceptional stability under all operating conditions. The circuit design is extremely simple using only axial-lead components.

Better Dynamic Range
The extra high-level receiver front end uses 24 VDC for both RF amplifier and mixer circuits allowing an extremely wide dynamic range for solid copy of the weak signals. For ultra clear copy on strong signals or noisy bands the high voltage JFET RF amplifier can be simply bypassed via a front panel switch boosting dynamic range beyond 100 dB. A PLL system using six narrow band VCOs provides exceptionally clean local signals on all bands for both transmit and receive.

Total IF Flexibility
An extremely versatile IF Shift/Width system using a totally unique circuit design, gives an infinite choice of bandwidths between 2.7 kHz and 500 Hz which can be tuned across the signal to the portion that provides the best copy sans QRM. A wide variety of crystal filters for fixed IF bandwidths are also available as options for both parallel and cascaded configurations. The 455 kHz third IF also allows an extremely effective IF notch tunable across the selected pass band to remove interfering carriers, while an independent audio peak filter can also be activated for CW reception.

New Noise Blanker
The new noise blanker design enables front panel control of the blanking rules width substantially increasing the number of types of noise interference that can be blanked, and vastly improving the utility of the noise blanker for all types of operation, including woodpecker blanking.

Transmitter Audio Tailoring
The microphone amplifier circuit incorporates a tunable audio network which can be adjusted by the operator to tailor the transmitter response to his individual voice characteristic before the signal is applied to the superb internal RF speech processor.

New Standard of Purity
Three 6146B final tubes in a specially configured circuit provide a freedom from IMD products and an overall purity of emission unattainable in two-tube and transistor designs while a new DC fan motor gives whisper-quiet cooling as a standard feature.

FV-102DM Synthesized, Scanning External VFO
The FV-102DM provides the FT-102 with the advanced frequency control necessary for optimum operating convenience where seconds count. The PLL synthesizer steps at a 10 Hz rate, while slow or fast scanning can be controlled either from the push buttons on the front panel or directly from the microphone connected to the FT-102 (when a scanning microphone is used). Up to twelve frequencies can be memorized by the FV-102DM entered from the FT-102, FV 102DM VFO or from the front panel numerical keyboard. Additional front panel controls include plus-and-minus 5 kHz and plus-and-minus 20 kHz stepping buttons, VFO dial lock, last digit blanking, and transmit/receive Main/VFO/memory selector buttons to allow any combination of frequency controls. The VFO dial can also be activated as a clarifier for a selected memory, while the five digit fluorescent display shows the operating frequency with resolution to 10 Hz, if desired.

FC-102 Antenna Coupler
The FC-102 is a newly designed antenna tuner. With a power handling capability of 1.2 kW the bandswitched L-C pi-network will match a wide variety of antennas (including a single wire) to your transceiver or linear amplifier on all HF bands. New design features include an in-line wattmeter with three ranges (20, 200 and 1200 watts full scale) and a "peak hold" system that enables the operator to observe peak power. A separate SWR meter is also built in for antenna tuning indication. The FC-102 includes internal relays to provide low-loss push button selection of two different antennas (and two transmitters), while the optional FAS-1-4R Remote Antenna Selector may be mounted either inside the FC-102 or right on your tower, to allow selection of four additional antennas. When remotely installed, the FAS-1-4-R is connected by a control line to the FC-102, eliminating the need for costly multiple feedlines.

SP-102 External Speaker/Audio Filter
The SP-102 features a large (120 mm) high-fidelity speaker with selectable low-and-high-cut audio filters allowing twelve possible response curves. Headphones may also be connected to the SP-102 to take advantage of the filtering feature.

SP-102P External Speaker/Phone Patch
The SP-102P provides a combination shaped response speaker and hybrid phone patch for simple interfacing. Gain controls and an audio level meter are included on the SP-102P.

BAIL ELECTRONIC SERVICES
38 FAITHFUL STREET, WANGARATTA 3677
Telephone: (057) 21 6260 — Telex: 56880
DISTRIBUTORS AND AGENTS IN ALL STATES

Stan Roberts
VK3BSR

THE VK3BWW FORMULA FOR DX SUCCESS!!

HIGH QUALITY AT LOW COST

BEAMS

3 EL 10 & 11m	**$71.00**
3 EL 15m	**$80.00**
3 EL 20m	**$154.00**
6 EL 6m	**$105.00**
5 EL 2m	**$36.00**
9 EL 2m	**$59.00**

DUOBANDER

3 EL 10m, 3 EL 15m **$144.00**
Prices include Gamma match

Our beams are easy to assemble and adjust. Entirely **NEW** CONCEPT — **NO** NUTS OR BOLTS.

Spare parts, elements, booms and gamma matches available.
Plus Freight

For further information
PLEASE RING (03) 366 7042

VK3BWW
WERNER & G. WULF
[illegible] LEONARD AVENUE
ST. ALBANS, VICTORIA 3021

SPECIAL

FOR THIS MONTH

YAESU's FT208R

2m FM HAND-HELD

This popular 2.5W output transceiver, featuring LCD display, automatic scanning re-start, scanning between two desired frequencies, memory back-up using lithium cell, plus all the usual features of Yaesu hand-helds

Contact Bail for Special Price

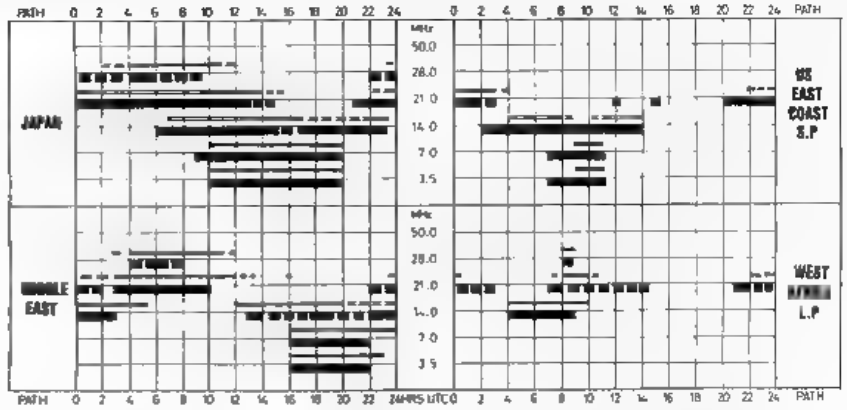
BANKCARD AND
MAIL ORDERS WELCOME

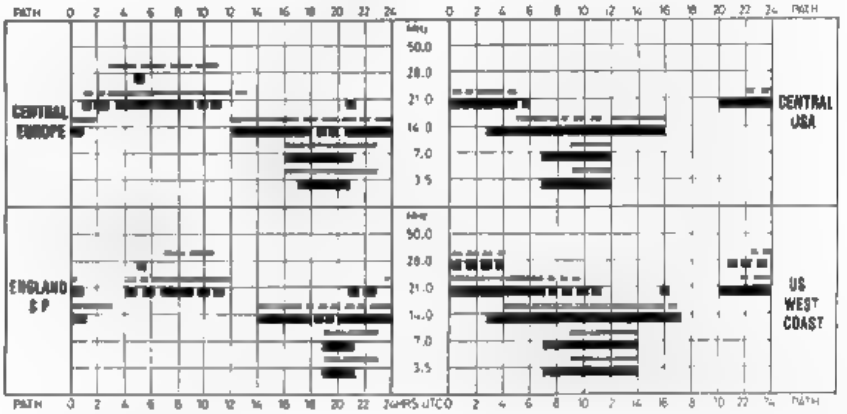
BAIL ELECTRONIC SERVICES

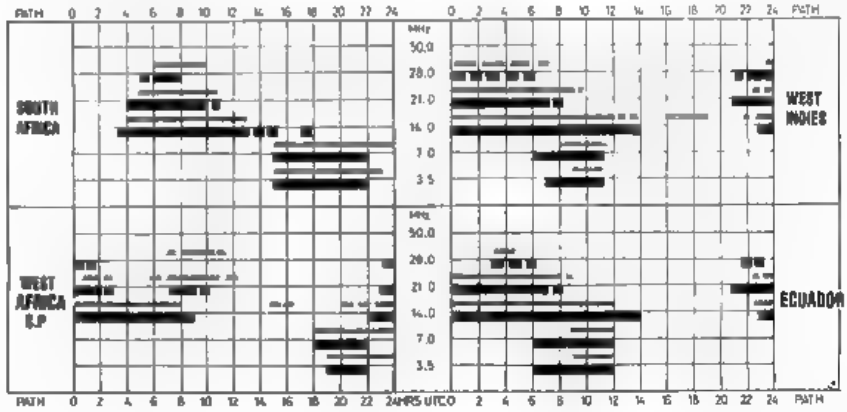
38 FAITHFUL STREET
WANGARATTA 3677
Telephone: (057) 21 6260

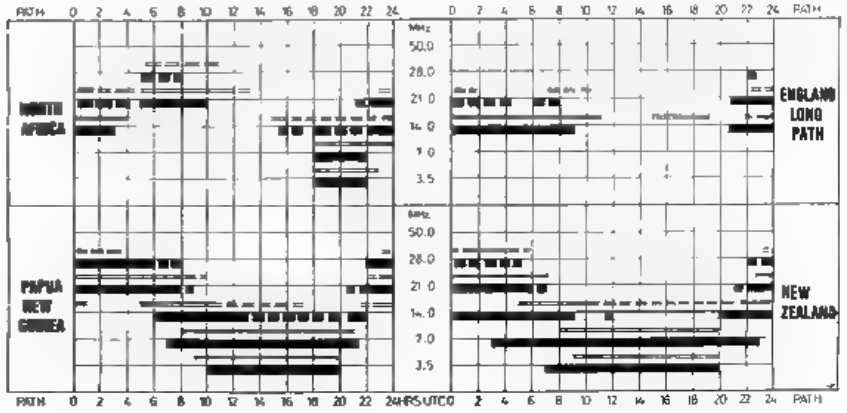
IONOSPHERIC PREDICTIONS

Len Poynter
VK3BYE









WA BULLETIN

Bruce Hedland-Thomas VK6OO
27 Parsons Street, Embleton 6062

COUNCIL REPORT FOR THE YEAR APRIL 1981 TO MARCH 1982

This report does not attempt to chronicle all the year's events but to pick out the highlights and to recapitulate some items which warrant formal recording in this manner.

MEMBERSHIP

There were 741 members on 25th January, 1982, compared with 662 at the same date last year. It is estimated that 30-40 of these are a direct result of a recruiting campaign held in September/October. The extra income from the new members more than covers the cost of the campaign but it is a disappointing result. It was followed by a Federal membership drive, which we felt we must tell their executive was poorly executed. Rising costs and more activities forced increases in both the Federal and Divisiona portion of the subscriptions.

MEETINGS

Monthly general meetings continued to be held in Science House, Perth, with good attendances, typically more than a hundred at the start of a meeting. There was a lecture or other programme approximately every third month, although it seems to be becoming increasingly hard to find lecturers. Don Lorrimer continued to cater for our suppers, assisted again this year by Mark Bastin. It was revealed during the year that Don has been looking after us for 22 years — score. Don 22, Mark 2.

QSL BUREAU

The Bureau made a small loss to the order of $60 this year due to increased postage costs. Jim VK6RU is confident that it can trade its way back into the black, but as postage continues to rise the situation will need watching. The Bureau now operates beyond the start of the meeting with the queue forming down the side aisle. The Federal body has adopted the IARU rule that the National QSL Bureau will accept incoming cards for non-members for delivery at the recipients' expense, but Council has upheld the policy that outwards use of the Bureau is restricted to members.

NEWS BROADCASTS

Regular broadcasts have been produced by Douglas VK6ZMG and his deputy, Alyn VK6ZGA. They have been of a high standard, and it is noted that Douglas received the Outstanding Voluntary Service Award for his work as Broadcasts Officer. All regular relay stations are thanked and it is with some pride that we can say that the news may be heard on all bands from 2-80 metres inclusive, with a 40 metre AM vertically polarised relay intended for SWLs. We have authorisation for a 160 metre relay and it is hoped that a volunteer station will soon be found.

AWARDS AND PRESENTATIONS

It is a pleasure to record that Jill VK6YL and Trevor VK6MS were joint Amateurs of the Year, it proving impossible to choose between them, mainly, but not entirely, for their contribution to the re-siting of Channel 4 repeater on Tic Hill. The first two of our Worked All Shires Awards were made towards the end of the year.

THE PATRON

The Council nominated the new Governor, His Excellency Sir Richard Trowbridge, for Patron once more. His Excellency invited the President to the Royal Garden Party, which was held during H.M. the Queen's visit to WA in October.

INNOVATIONS, ACTIONS AND ACTIVITIES

The Division sent a $100 dollar donation to the VK5 "Save Our Hobby" Tower Appeal Fund. They have proposed a National Special Purposes Fund.

Insurance cover for volunteer workers was increased. The comparative figures are —

Death $2,000, increased to $50,000.

Disability $52 for 52 weeks, increased to $250 for 52 weeks.

Three workers on site, increased to 25 workers.

Public liability increased to $1m.

A valve bank was established. Deposits already number several hundred.

The Division's archival minutes dating back to 1914 were lodged with the Battye Library on restricted access and authority to remove.

Joint WIA/DOC meetings during office hours were instituted to substitute the Amateur Advisory Committee, which had been wound up due to lack of funds. Three joint meetings were held during the portion of the year following this agreement.

VK6 amateurs sent more than a hundred letters of protest about the Russian Woodpecker to various Federal Ministers and were "mentioned in dispatches" by our Federal Executive.

Our official permanently portable call sign was changed from VK6AWI to VK6WIA in accordance with the wishes of a majority of members.

In November, five Council members made a weekend visit to the "deep south", Narrogin and Albany, which was appreciated by our members there and helpful to us.

Institute letterheads are now available to members for their personal correspondence.

A number of historical documents and photographs were produced during the year, notably by John VK6BB. Rodd VK6DA continues to be unofficial historian and preserve these priceless items.

VK6 has proposed three motions for the 1982 Federal Convention. They asked for full licence at age 14; increase of the Novice sub-band in 15 metres; a Novice allocation in the 70 cm UHF band subject to certain conditions. We continue to lobby, with encouraging results, for a change in the RD contest rules. The Federal Councillor and Alternative Federal Councillor for 1982 are again Neil VK6NE and Bruce VK6OO.

We supported VK7 in their protest via the Federal body about a trial of "licensing by sticker" in that State as not being appropriate for the amateur service where multiple transmitters and home construction are common.

Complaints about the standard of AR journal and numerous suggestions for its improvement were addressed to Federal Executive. These may have borne fruit in the appointment of a new production team.

Our enthusiastic YLs handed out welcome and information sheets to candidates as they left the November and February exams. We all need to try to increase our membership at all times.

WICEN

The caravan purchased last year has been fitted out by the team as a mobile forward communication centre. It has been shown to the public at JOTA, the SES display and the St. John's Ambulance exercise. WICEN this year handled the communications for the Christmas Pageant and of course acted in a number of search and other emergency situations. It now has three of its own call signs, VK6WIE, VK6WIC and VK6WIF.

BOOK SALES

Book sales, into which Chris VK6DV puts so much of his time, continue to be our only source of income after subscriptions. On the Albany trip, as on last year's country trip, books sold like the proverbial hot cakes.

JOTA

The participation in JOTA 1981 was the best ever.

No. of stations increased	7%
No. of amateurs increased	9%
No. of Guide groups increased	33%
No. of Scout groups increased	7%

On New Year's day sixteen amateurs participated in the Girl Guides' camp.

REPEATERS

The Repeater Group has been very active with a number of technical innovations, but the highlight of their year was the opening in October of the channel 4 repeater re-sited to the north-east of Perth. It was formally opened by Barry Field VK6BR, State Manager of the Regulatory and Licensing Section of the Department of Communications. Repeater coverage to the north-east is much improved and the repeater has its own power from a wind generator.

INTRUDER WATCH

Dave VK6WT, who has been Intruder Watch Co-ordinator for several years, has announced his retirement. We thank Dave for his devotion to this most important aspect of amateur radio which is so neglected by a majority of operators. We don't feel anyone can replace Dave, but we hope that someone will offer to try.

IN CONCLUSION

Council would like to thank the various others not mentioned here who have

worked for and contributed to the Institute. It is a truism that you only get out of amateur radio what you put into it: the corollary to that is that the more you put in, the more you will get out. It is sad but true that in today's competitive world you cannot stand still. If you don't strive to go forward, you are likely to lose the privileges you have at present. Will every member please strive to contribute at least one thing next year?

Bruce Hedland-Thomas VK6OO, President.

FINANCIAL REPORT OF THE WIA (WA DIVISION) 1981

EXPENDITURE

1980 $		1981 $
	Administration:	
247.00	Advert./Print./Stat	546.28
99.00	Insurance/Licences	456.00
	(Postage/Phones	667.56
622.22	(Expenses	43.74
315.00	Hire of Hall	325.00
642.65	Convention Expenses	41.00
—	Country Visits	749.53
815.60	Sundries	67.28
2,741.67		2,896.39
66.00	Life Members (5)	90.00
—	Awards	147.57
66.00		237.57
—	AMSAT	41.94
—	Trophies	66.22
—	Video News	32.00
—		139.16
	[illegible]ns:	
—	Para Quad	115.00
701.88	WICEN	550.00
—	SA Tower Fund	100.00
100.00	WA Repeater Group	200.00
801.88		965.00
35.97	Christmas Dinner	469.29
—	Less Recoup	312.00
35.97		157.29
	Equipment:	
—	Written Off	131.00
164.86	Depreciation	184.87
164.86		315.87
308.00	Book Stock Written Off	—
	Provision for Invest. Int:	
—	Received	437.62
—	Accrued	333.33
308.00		770.95
753.75	Surplus	—
$4872.15		$5482.23

[illegible]

$		$
	Subscriptions:	
—	Received from Federal	3923.58
—	Brought Forward	1340.25
—	Less Paid to Federal	1550.50
3204.31		3713.33
325.00	Donations	—
	Bank Interest:	
	(Current Account Received	395.11
	(Current Account Accrued	61.19
	(Less Accrued Last Year	150.00
	(Investment Account Received	437.62
	(Investment Account Accrued	333.33
973.51		1,007.25
	Sundries:	
—	Tea	45.95
—	Awards	3.30
—	1980 Subscriptions	7.00
—		56.25
469.33	Gross Profit — Trading Account	501.88
—	Deficit	133.52
$4872.15		$5482.23

Note:

The provision for Investment Interest shown under Expenditure refers to Council's decision to separate Interest on Investments from working capital due to the effect of inflation on invested capital.

[illegible] AS AT [illegible]/81

LIABILITIES

$		$
	Accumulated Fund as at	
11272.54	1st January	12026.29
S. 753.75	Surplus/Deficit	D. 133.52
—	Investment Interest (Provision)	770.95
12026.29	NET WORTH	12663.72
1340.25	Subscriptions in Advance	1696.16
173.55	D. Smith Fund	7.30
—	Sundry Creditors	1308.96
$13540.09		15676.14

ASSETS

$		$
1440.82	R and L Cheque Account	2621.74
10129.00	TCPBS Pass Book and Shares	1664.38
—	Telecom Credit Union	8000.00
50.00	Book Shop — Float	50.00
—	Secretary's Float	77.70
	Accrued Interest —	
	(Investments	333.33
150.00	(Working Capital	61.19
732.40	Trading Stock	2106.60
	Equipment —	
	Brought Forward $1037.87	
	Purchased 20.00	
	Less —	
	Written Off 131.00	
	Depreciation 184.87	
1037.87		742.00
—	Sundry Debtors	19.00
$13540.09		15676.14

(Signed) C. A. BASTIN, Hon. Treasurer

We certify that we have examined the books and vouchers of the WIA (WA Division) and have found them to be kept in a business-like manner and to record the true financial position of the Division at the close of the period.

We compliment Mr Bastin on the informative manner in which the books have been kept and the Final Accounts presented.

We have received every assistance in the auditing of the Accounts

(Signed) FRANK TAYLOR VK6JK
(Signed) A. VAN DEN AVOORT VK6HA
Honorary Auditors

25th March, 1982.

THE 6th WEST AUSTRALIAN ANNUAL 3.5 MHz CW AND SSB CONTESTS — TRANSMITTING AND RECEIVING

C. Waterman VK6NK
Box 6250, Perth 6000, WA

Rules

DURATION.

C.W. — Saturday, 31st July, and Sunday, 1st August.

SSB — Saturday, 4th, and Sunday, 5th September.

On both days between the hours of 1100Z and 1330Z time, i.e. five operating hours in all for each contest.

FREQUENCIES:

All contacts to be made in the 3.5-3.7 MHz band using frequency allocation applicable to your licence conditions.

CALLING

Stations will call CQ WAA using the three times three technique; infringement of this rule by the use of long CQ calls may entail disqualification as will pre-arranging of a QSO.

SCORING:

Points for contacts are as follows:—

Within Western Australia: 5 points per contact.

WA to all mainland Eastern States: 2 points per contact.

WA to VK7. 4 points per contact.

WA to VK0 and Overseas. 8 points per contact.

3 points per contact with WA stations only.

MULTIPLIERS.

A multiplier of 1 per WA Shire worked will apply to the final score.

CONTACTS:

Stations may be worked twice on each night, i.e. once between 1100Z to 1300Z and again between 1300Z to 1330Z, these contacts will count for points. Each time the contact for WA stations will take the form of an exchange of 5 characters comprising RST/RS and Shire letters, e.g. a station in NORTHAM sends 579NM or if in HARVEY 579HY; this helps towards the worked all shires award.

Eastern States and overseas stations will send RST/RS, plus a running number starting at 001.

LOGS:

Contest logs to be set out on one side of a quarto or foolscap sheet with columns headed as below

DATE: CALL: OPERATOR:

TIME Z	CALL WKD	RST OUT	RST IN	SHIRE LETTERS	SHIRE MULTIPLIER	POINTS CLAIMED

Column 7 to be totalled at the foot of each page and the running totals brought forward. The last page to contain the following summary: Total number points scored, input power, equipment and antennas used, along with comments on the contest in general. SWL participants score as above using the outgoing TX score.

All logs to be addressed to the WAA Contest Committee, PO Box 6250, Hay Street East, Perth 6000, and posted so as to reach us not later than 31st August for the CW contest and 30th September for the SSB contest. The results for all contests will be published in the December issue of AR.

SHIRE LETTERS

1	Albany Town	AT
2	Albany	AL
3.	Armadale	AK
4.	Augusta-Margaret R.	AM
5.	Bassendean	BA
6.	Bayswater	BW
7	Beverley	BV
8.	Boddington	BO
9.	Boulder	BD
10	Boyup Brook	BB
11	Bridgetown-Greenbushes	BG
12	Brookton	BK
13.	Broome	BE
14.	Broomehill	BH
15	Belmont	BL
16.	Bruce Rock	BR
17	Bunbury	BY
18	Busselton	BN
19.	Canning	CA
20.	Capel	CL
21	Carnamah	CH
22.	Carnarvon	CN
23.	Chapman Valley	CV
24	Chittering	CI
25.	Claremont	CT
26.	Cockburn	CR
27	Collie	CE
28.	Coolgardie	CG
29	Coorow	CW
30.	Corrigin	CS
31.	Cottesloe	CO
32.	Cranbrook	CK
33	Cuballing	CB
34.	Cue	CU
35.	Cunderdin	CD
36.	Dalwallinu	DU
37	Dandaragan	DN
38.	Dardanup	DP
39.	Denmark	DK
40.	Donnybrook-Balingup	DB
41	Dowerin	DR
42.	Dumbleyung	DG
43.	Dundas	DS
44.	E Fremantle	EF
45.	East Pilbara	EP
46.	Esperance	ES
47.	Exmouth	EH
48.	Fremantle	FM
49.	Gingin	GG
50.	Gnowangerup	GP
51.	Geraldton	GN
52.	Goomalling	GM
53	Gosnells	GS
54	Greenough	GR
55	Halls Creek	HC
56.	Harvey	HY
57	Irwin	IN
58	Kalamunda	KA
59.	Kalgoorlie	KL
60.	Katanning	KG
61	Kellerberrin	KN
62.	Kent	KT
63	Kojonup	KP
64	Kondinin	KD
65.	Koorda	KO
66.	Kulin	KU
67	Kwinana	[illegible]
68.	Lake Grace	LG
69	Laverton	LV
70.	Leonora	LA
71	Mandurah	MB
72	Manjimup	MP
73.	Meekatharra	MK
74.	Melville	MV
75.	Menzies	MZ
76	Merredin	MD
77	Mingenew	MW
78.	Moora	MA
79.	Morowa	MR
80.	Mosman	MS
81.	Mukinbudin	MU
82.	Mullewa	ME
83.	Mundaring	MG
84.	Murchison	MH
85.	Murray	MY
86.	Mt. Magnet	MM
87.	Mt. Marshall	ML
88.	Nannup	NP
89.	Narembeen	NN
90.	Narrogin	NG
91	Narrogin Town	NT
92.	Nedlands	NL
93.	Northam	NM
94.	Northam Town	NO
95.	Northampton	NH
96.	Nungadin	NG
97.	Peppermint Grove	PG
98.	Perenjori	PJ
99.	Perth	PH
100.	Pingelly	PY
101.	Plantagenet	PT
102.	Pt. Hedland	PD
103.	Quairading	QQ
104.	Ravensthorpe	RT
105.	Rockingham	RM
106.	Roebourne	RB
107.	Sandstone	SS
108.	Serpentine-Jarrahdale	SJ
109.	Shark Bay	SB
110.	South Perth	SP
111.	Stirling	ST
112.	Subiaco	SU
113.	Swan	SW
114.	Tambellup	TP
115.	Tammin	TM
116.	Three Springs	TS
117	Toodyay	TY
118.	Trayning	TG
119.	Upper Gascoyne	UG
120.	Victoria Plains	VP
121	Wagin	WN
122.	Wandering	WD
123.	Wanneroo	WO
124	Waroona	WR
125	West Arthur	WA
126.	Westonia	WS
127	West Pilbara	WP
128.	Wickepin	WI
129.	Wiluna	WU
130	Williams	WL
131	Wongan-Ballidu	WB
132.	Woodanilling	WG
133.	Wyalkatchem	WY
134.	Wyndham E-Kimberley	WE
135.	W Kimberley	WE
136	Yalgoo	YO
137	Yilgarn	YN
138	York	YK

QSP

GEOSTATIONARY SPACE STATIONS

A table issued with the ITU Telecommunication Journal of April 1982 shows a total of 220 satellites already in the geostationary orbit and those planned for such an orbit. This makes for some crowding. ■

FIVE-EIGHTH WAVE

Journalist for July

Jenny Warrington VK5ANW
59 Albert St., Clarence Gardens, 5039

Once again the VK5 Divisional notes are back in the columns of AR. At present we do not have a full-time "journalist" so several of us will be "trying our hand" so to speak. We in VK5 have a great image to live up to, that of Warwick (PanSy) Parsons VK5PS, whose popular column it is said was always read first in many households. We may not manage to find another PanSy, but we'll certainly try to keep you informed of the "goings-on" in VK5. We would welcome local news from the many clubs around the State, and perhaps someone in VK8 could keep us in touch with interesting "happenings" from up there — all contributions via Box 1234, GPO, Adelaide, please.

ANNUAL GENERAL MEETING

The AGM of the VK5 Division was held at the Burley Griffen Building on Tuesday, 27th May. As only the minimum number required (7) nominated for Council, no ballot was necessary. The following members were declared elected, and have since been elected to the positions shown:—

President: Bill Wardrop VK5AWM.

Vice-President, Secretary, Alternate Federal Councillor: David Clegg VK5AMK.

Vice-President, ESC Co-ordinator: Dick Boxall VK5ARZ.

Treasurer John Butler VK5NX.

DOC Liaison Officer: Maurie Phillips VK5ZU.

Education Officer, Assistant Treasurer: Graham Ratcliff VK5AGR.

Membership Secretary: Ken Westerman VK5AGW

Also on Council by reason of their office.—

Immediate Past President: John Mitchell VK5JM.

Federal Councillor, Minutes Secretary: Jenny Warrington VK5ANW.

Facilities Supervisors VK5AMK and VK5AGR.

HIGHLIGHTS OF MEETING

One of the highlights of this meeting was the presenting of Honorary Life Membership to Colin Hurst VK5HI. Colin has served this Division well for many years as Federal Councillor, Treasurer and President, and was a popular choice as a recipient.

Another popular choice to receive Honorary Life Members is Ian Hunt VK5QX. Ian has served a similar number of years to Colin and has also been Federal Councillor and President. His past year has been spent as a liaison between Council and our lawyer on a tower case, which was finally won in the Supreme Court. Ian is currently touring the USA and so was unavailable to receive his Life Membership badge.

HONOUR ROLL

The proposal to place an Honour Roll Board in the meeting hall at the BGB has created an upsurge of interest in things historical ,especially the names of former Presidents, Life Members and holders of the Certificate of Merit. To encourage this, we are currently running a competition locally to name the greatest number of VK5 Divisional Presidents, in correct order, with their years. This project is also keeping our Historian, Jack Coulter VK5JK, Brian Austin VK5CA and myself out of mischief trying to compile a check-list of our own — so that we can check the competitors!

NEW GEAR FOR THE WICEN GUYS

Our WICEN boys are currently resplendant in their new caps and T-shirts, and will soon have jackets also. These are available through the Director, John Mitchell VK5JM, via Box 1234, GPO, Adelaide 5001. Other Divisions may also be interested.

ALL WELCOME

Meetings of the VK5 Division are held in the Burley Griffin Building (at the rear of the Municipal Council Depot), West Thebarton Road, Thebarton, on the fourth Tuesday of every month (except December) at 8.00 p.m. Local and interstate visitors are always welcomed. ■

FORWARD BIAS

VK1 DIVISION

Barry Bennetts VK1BB

MEETING PROGRAMME

The next three monthly meetings of the Division will be held on June 28, July 26, August 23.

The meetings are held at the Griffen Centre, Civic ACT. Members gather at 7.30 p.m. for a ragchew, collect QSL cards, and the meeting generally starts around 8 p.m. Visitors are always welcome to attend, so come along and make yourself known.

NOVICE NET

As an alternative to 2 metres it has been suggested that 28.485 MHz be used as a frequency whereby novices (or others) can contact each other locally, particularly during the silent hours. This also would give novice visitors to Canberra an opportunity to meet a VK1 and obtain directions and to be made welcome into the capital. The frequency was selected because of the easy conversion from CB rigs, hence mobile operation

ACTIVITY GROUPS

The Division is seeking to determine from members their major amateur radio interests pursuant to forming specialist operating groups, e.g. RTTY, SSTV, PACKET RADIO, SWL, CONTESTING, FOX HUNTS, etc. If response is favourable the Division will appoint Liaison officers to the committee to co-ordinate these activities and to generally give support. It is realised that amateur radio is a diverse hobby and the Institute should be doing all it can to stimulate and foster interest. ■

CLUB CORNER

Manly-Warringah District Radio Club

SYDNEY TO RIO RACE

Although the race only took 39 days, the preparation and time given by radio amateurs ran into months. In fact a "dry run" was made maintaining contact with the Sydney to Noumea race early in 1981.

EARLY PLANNING

The race commenced on January 24, 1982, however planning started in August 1981, when Peter Rysdyk, the Race Controller, Barry White VK2AAB, of Hornsby District Radio Club, Ian Dodd VK2DLU, of Manly Warringah District Radio Club, put their heads together.

In the early preparations, not many of the ships participating in the race wanted radio amateurs on-board. In hindsight, many wished they had! The ship that selected to have an amateur aboard was "Buccaneer", skippered by Joel Mace, and the amateur operator selected was Ray Smith ZL2AQV.

Preparation was not just — "see you on 14,200 Ray". Firstly the DOC State Manager, the State Manager OTC, Acting First Assistance Secretary DOC, CYC officials, Skippers and crews, Penta Base radio operator, Melbourne Meteorological Officers and many more. Graham Buchan VK2BGB, Radio Officer aboard "Australian-Escort", talked about emergency use and ship communication procedures, and Col Christiansen presented an excellent talk on Antarctic Stations and beacons that can be used en route.

AMATEUR PARTICIPATION

Amateur radio planning was well disciplined. Ian Dodd VK2DLU prepared the Operating Procedures, which consisted of frequencies, times, call signs, logging, land communication to the Control Centre at CYC Sydney, and message handling, both in and out. The club station of Manly Warringah District Radio Club, VK2MB, was selected as the operating site. The club station is located at the old radar site at Beacon Hill on the north side of Sydney, and has a TH6DXX six element tri-band beam as well as LF antennas permanently installed.

The race started on January 24, but amateur operation did not start until the following day. First 7 MHz and then three days later shifted to 14 MHz. Unfortunately the frequency selected on 14 was the same one being used by the Dick Smith Antartic Expedition, so a slight frequency shift had to be made and was eventually fixed around 14,120.

FIRST SKEDS

Firstly skeds were set for early morning and then as time changes occurred, evening skeds became more popular. Operators were divided into groups of three, one operating, one logging and one handling the shore lines. From the two clubs over 20 licensed operators took part.

Although some days communication was very poor, with the help of many willing amateurs in New Zealand, Argentina and Brazil, all messages got through.

AROUND THE HORN

Most messages were weather reports, position reports and personal messages to the families back home. Perhaps the highlight of the race was just after Buccaneer rounded the Horn and sent her position report and an up-date story. Buccaneer had a crew of 15 comprising 10 Australians, three New Zealanders, one American and one Brazilian. The Horn had lived up to its reputation and blew a force 8 gale for them. At that time they had been 25 days at sea, had a fine kit of torn sails, including six main sails, six head sails and two spinnakers. They worked in three watches. Their most frightening moments occurred in the high seas, and they reported that a 22 metre boat surfing down a 10 metre wave was not fun! The last day of communication with Buccaneer was 150 miles from Rio, when congratulations were passed and the amateur stations closed down.

In appreciation for the work and dedication given by the two Radio Clubs the CYC of Sydney gave a luncheon to the operators and presented both clubs with plaques and burgees from both the CYC and Rio.

Thanks go to VK2s AAB, AGS, ANF, ASM, AYD, BBF, BDF, BMZ, BTA, DOG, DI, DLU, KBJ, KLX, NPO, RA, ZHV, ZYI, ZGD and ZJO for their operating time and to ZL2BKY, ZL2GL, LU8EBI and PY1ZAK for their assistance.

Amateur radio will never be forgotten by the ocean sailors of Sydney.

Prepared by David A. Pilley VK2AYD, Public Relations Officer, Manly Warringah District Radio Club. ■

N.S.W. Guides

RADIO MUSTER

The Girl Guide Association in New South Wales is conducting a Muster at Dubbo from the 29th August to 5th September, 1982, and for the first time in New South Wales there will be an amateur radio station in operation on the site.

This station will be operating as part of the Muster programme and has been requested by many of the Guides who have previously taken part in Jamboree of the Air. The official call sign of the Girl Guides of NSW (VK2GGA) will be used and most bands will be operational with 7.090, 14.190 and 21 190 MHz being the main frequencies. Operating times will be from 23.00 to 11 00 UTC with the girls operating in the daytime and the leaders in the evening.

Anyone wishing further information may contact John Lambert VK2AKQ, QTHR, or Valda Lambert, Public Relations Officer for the Dubbo State Muster, 76 Ula Crescent, Baulkham Hills 2153.

Tamworth AR Club

The Tamworth Amateur Radio Club announces that the annual Noel Taylor Memorial Field Day will be held on the 4th and 5th September, 1982, at Duri Hall.

They will be having a social evening on Saturday night with an old-fashioned gathering around the open fire, and delicious spit-roasted pig with all the trimmings available.

All the usual fox hunts, competitions and displays, etc., will be held throughout Saturday and Sunday, so come along and join in all the fun. For further information contact E. Mogor VK2VDQ, Tamworth Amateur Radio Club, Victor Street, Wallabadah, NSW 2343. ■

COMMERCIAL CHATTER

TESA/TETIA CONVENTION

Planning is now well under way to ensure that this year's TESA/TETIA Convention will continue the successful and informative format established in earlier conventions.

The 1982 Television Electronic Services Association of Australia/Television and Electronic Technicians' Institute of Australia Convention will be held at the Palm Lake Motel, 52 Queens Road, Melbourne, from Saturday, 23rd October, 1982, to Thursday, 28th October, 1982.

A full programme of lectures, forums, social activities and technical tours will be set out in the Convention Brochure/Registration Form shortly.

Further information may be obtained from Mr. J. L. Klemmer, Secretary, Box 21, Hawthorn, Victoria 3122. ■

A VISIT TO ARRL

Whilst on a recent business trip to America the National Sales Manager for Scalar Distributors, Geoff Atkinson VK3YFA, had the good fortune to find himself in Hartford, Connecticut, quite near American Radio Relay League (ARRL) Headquarters and, although he is not a member of the ARRL, it was too good an opportunity to allow to pass.

As he had anticipated being in the area,

Geoff was equipped with a letter of greeting and introduction from the committee of the EMDRC.

Anyone is welcome at ARRL Headquarters during office hours (8.00 a.m.-4.30 p.m.), Mondays to Fridays, and tours of the administrative complex and Maxim Memorial Station, W1AW, are conducted on the hours of 9, 10, 11, 1, 2, 3 and 4. Geoff's special guide was Peter Dell KB1N, one of the 120 staff members. (When one considers that the USA has more than 400,000 amateurs it is easier to appreciate the need for so many staff members.)

In the foyer of headquarters building are many glass display cases showing the history of components and equipment of our hobby, whilst suspended from the ceiling is a 90 pounds radio controlled glider which used to fly in the mid-1930s. Geoff quotes "Quite a sight. Goodness knows how it flew. Definitely heavier than air."

Geoff's tour included a description of the services and operations of various departments. Communications, Club and Training, Technical, Membership Services, Advertising, Production, Circulation and Controllers (Accounts) Departments. But the highlights of the tour were the Museum, Hiram Percy Maxim's "Old Betsy" Sparkgap Transmitter (still in working order) and the Ralph P. Thetreau Memorial Antenna System.

W1AW operates from 7.30 am. to 1.00 a.m., Monday to Friday, and 3.30 a.m. to 1.00 a.m. on Saturdays and Sundays. Any FCC licensed amateur may, on the presentation of his current FCC amateur licence, operate the station between 1.00 p.m. and 4.00 p.m., Monday through Friday.

Geoff was disappointed that his time was limited due to his business commitments, but his short time spent at ARRL headquarters was most enjoyable and enlightening. ■

* * * *

"He was never happy about anything. He was always so out of sorts that when he died and knocked on the Gates of Heaven, St. Peter greeted him with, 'Come in, but I'm sure you're not going to like it here'."

VK2 MINI BULLETIN

Athol Tilley VK2BAD
PO Box 123, St. Leonards, NSW 2065

COUNCIL REPORT

A special Council meeting was held on the 4th of May to discuss the sale of 14 Atchison Street, Crows Nest, the current Divisional Headquarters. Stephen Pall and Susan Brown reported on discussions with various real estate firms. Council considered written submissions from two of these firms and resolved to appoint Baillieu Hardie Gorman Pty Ltd. as selling agents. An expenditure of $2,500 for a marketing campaign by this firm was approved.

At the meeting held on the 14th of May, Council decided to purchase a property in Wigram Street, Parramatta. This property will become the new Divisional Headquarters once Atchison Street is sold in June. Council adopted a policy statement outlining the future requirements of the NSW Division. The following officers were appointed: QSL Officer, Doug Pearson VK2AVO, Slow Morse Supervisor, Marshall Emm VK2DXP, NSW AR Publicity Officer, Tom Delandre VK2PBT; Dural Committee, Peter Jeremy VK2PJ, WICEN Committee, Tim Mills VK2ZTM, replacing Fred Parker VK2NFF/ZBK. The positions of JOTA and VK2 Contest Publicity Officer remain unfilled — perhaps you may care to volunteer. Council resolved to purchase additional copies of various amateur radio publications to improve the service to members using the Divisional Library.

For the fireworks night, Council approved an expenditure of $1,800, to be paid for from ticket sales. To provide added safety on the night, the Dural Committee was authorised to purchase and install four extra floodlights. Dural Officer Jeff Pages presented a report for May. Approval was given to construct a 160 metre receiver to further improve broadcast facilities. The length of and delay in conducting callbacks was discussed and ways of improving this situation will be investigated.

POLICY STATEMENT, FUTURE REQUIREMENTS OF THE NSW DIVISION

A. A CENTRALLY LOCATED OFFICE ABLE TO PROVIDE MEMBERSHIP SERVICES, E.G.:—
   (i) Correspondence to and from members, Federal WIA, affiliated clubs, AOCP correspondence courses, etc.
   (ii) Storage and accessibility for a Divisional Library, including an archival section.
   (iii) Sales of publications, small disposal items and sundries.
   (iv) Meeting room (combined with library area) for up to 30 people.
   (v) Meeting room to double as a lounge/reading area for members visiting during weekdays and evenings.
   (vi) Possible future storage area for Education Service publications.

B. A TRANSMITTING STATION CAPABLE OF THE FOLLOWING:—
   (i) Weekly broadcasts on multiple frequencies.
   (ii) Occasional WICEN emergency or training use, including the weekly WICEN net.
   (iii) Occasional outdoor functions.

C. QSL BUREAU PREMISES. (These are at present provided free by Westlakes.)

D. LARGE MEETINGS, such as AGMs, EGMs, WICEN Co-ordinators' Conferences, Conferences of Clubs, etc., can be catered for by hiring (often at no cost) suitable large convention rooms or halls.

6th CONFERENCE OF CLUBS

The 6th Conference of Clubs was held on Sunday, the 23rd of May at the Revesby Workers' Club, the host club being the Liverpool and Districts Amateur Radio Club. Bob Demkin VK2KAN was Chairman and Kevin Kenny VK2YPZ acted as Secretary. Twelve clubs affiliated with the NSW Division were represented at the Conference by the following delegates (the number of votes allocated to each club appears in brackets):

Bathurst ARC, Neville Wilde VK2DR (1); Central Coast ARC, Stan Dogger VK2KSD (5), Goulburn ARS, Marshall Emm VK2DXP (2); Hornsby ADARC, Barry White VK2AAB (2); Liverpool ADARC, John Dutfield VK2KDJ (1); Illawarra ARS, Dennis McKay VK2DMR (8), Mid South Coast ARC, Stan Bourke VK2EL (4); Orange ARC, Wally Watkins VK2DEW (3); Parkes ADARC, Neville Wilde VK2DR (1); South West ARS, Greg Weis VK2VVM (3); Wagga ARC, Jeff Brill VK2KBK (3); Westlakes ARC, Keith Howard VK2AKX (11).

A total of 27 persons were present, including five members of the NSW Divisional Council. The meeting adopted the minutes of the 4th Conference of Clubs and of the meeting of Clubs held at Wollongong in 1981.

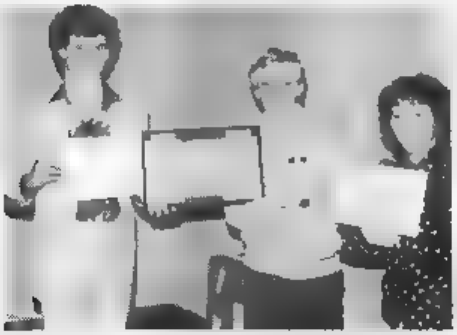
Agenda items carried by the meeting included: (1) That a general calling frequency of 28.49 MHz be adopted on a State-wide basis. (2) That all items for future Conferences of Clubs should be accompanied by a brief explanation of intent. (3) That the John Moyle National Field Day be afforded a lot more publicity by the WIA during the three months prior to the contest. (4) That the DOC be asked to hold all exams quarterly. Other agenda items were either lost, referred to the next Conference or withdrawn. All motions carried at this Conference will now be considered by Divisional Council.

A presentation was made to the affiliated Club achieving the greatest percentage increase in WIA membership since the last Conference. A merit certificate and a UHF SC9 transceiver were awarded to the Orange Amateur Radio Club in recognition of its achievement of a 40 per cent in-

Delegates, observers and council representatives at the 6th Conference of Clubs.

(Left to right, top to bottom: VK2s DBA, EL, BYY, ZTM, PJ, DEW, ZMZ, DXP, YWR/VTD, VVM, KDJ, KBK, KAN, YPZ, ATR, AKX, DPY, BSB, DR, DMR, ZTB, AAB, KSD, PNK.)

crease Divisional President Susan Brown VK2BSB commended the Westlakes Amateur Radio Club on its achievement of an 18 per cent increase as this meant 31 club members had joined the WIA. Merit Certificates were presented for participation in the John Moyle National Field Day VK2 inter-club contest to the winning clubs. Griffith Amateur Radio Club in the 24 hour open section with 7,767 points and the Liverpool and Districts Amateur Radio Club in the 6 hour phone section with 1,360 points.



Presentation to winning VK2 clubs in the John Moyle Field Day — left to right: Greg VK2VVM, Griffith ARC; John VK2KDJ, Liverpool ADARC; Sue VK2BSB, Divisional President.

The next Conference of Clubs will be hosted by the Westlakes Amateur Radio Club at a date and venue to be advised.

DETAILS OF TWO CLUBS AFFILIATED WITH THE NSW DIVISION

MID SOUTH COAST ARC
PO Box 7 Milton, NSW 2548.

NET: Wednesdays at 2030 EST on VK2RMU repeater channel 6700.

Wally VK2DEW receiving certificate and SC9 transceiver on behalf of Orange ARC, for highest percentage increase in WIA membership.

MEETINGS. As and when announced, quarterly

PRESIDENT: John Telfer VK2BTQ. Vice-President: Hal Knott VK2ZEN. Secretary Jim Yalden VK2YGY

MAGAZINE: Lyrebird, quarterly, Editor Hal Knott.

GUNNEDAH ADARC
C/- 7 Marcia Street, Gunnedah, NSW 2380.

MEETINGS: 1st Thursday of month at 8 p.m. at Scout Hall, South Street, Gunnedah.

PRESIDENT. Simon Lister VK2AIS. Vice-President: Barry Harwood VK2KAY. Secretary: Russell Parker VK2PNJ

REPEATER: VK2RAB, channel 6850.

VISIT BY U.S. AMATEURS

A group of USA amateurs have notified this Division that they will be visiting Australia in October. They will be in Sydney on October 10th to 13th and would like to meet local radio club members and interested amateurs during this visit. If you can assist you can write to Gary Pickard WB7VIW at PO Box 10187, Phoenix, Arizona 85064, USA. A reminder will be given on the broadcast just before their proposed visit.

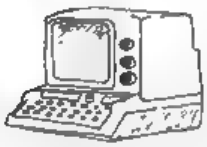
COMING EVENTS

Tamworth Field Day, September 4/5.

NSW members and clubs are invited to submit news for inclusion in this column to PO Box 123, St Leonards, NSW 2065. News for August AR should reach us by June 20.

Photos by Athol Tilley VK2BAD

■



RTTY Scheds

VK2TTY is the official station of the Australian National Amateur Radio Teleprinter Society (ANARTS) based in Sydney

VK2 Broadcast for radio amateurs every Sunday on the following frequencies and times:—

7.045 MHz at 0030 UTC.
14.090 MHz at 0030 UTC
3.545 MHz at 0930 UTC
146.600 MHz at 0930 UTC

W1AW is the news service station of the ARRL. They have daily predictions as well as ARRL and CRRL bulletins

Immediately following their broadcast they re-transmit it using 710 baud ASCII and standard RTTY tones of 2125/2295 Hz.

W1AW recently changed to their summer transmission schedule, simultaneous transmission on 14.090, 21.890 and 28.090 MHz.

Times 2200 UTC, but Monday to Fridays only, also at 1500 UTC

GB2ATG is the news service station of the RSGB and the Amateur Group (BARTG). They are currently using their summer transmission schedule broadcast every Sunday at 0730 UTC.

VK3RTY, the new RTTY repeater, will be operating from a temporary suburban location under test conditions on some evenings during the next few weeks between 1000 UTC and 1200 UTC.

The frequencies required to access the repeater are. Input 147.950 MHz; output 147.350 MHz.

NOTE: A space character from the space bar must be sent to open the repeater. After this you may type normally.

More RTTY news is welcome. ■

"Doctor, I have come to see you because I have the feeling that no one understands me."

"Oh, nonsense. What makes you think someone is persecuting you?"

VK4 WIA NOTES

K. B. Pounsett VK4QY
33 Lasseter Street, Kedron, Qld. 4031

THE SUNSHINE STATE "JACK FILES MEMORIAL CONTEST"

The annual Queensland contest is on again this month. The aims of the contest are to remember the late Jack Files and to give amateurs the opporunity to work VK4 stations to obtain the Worked All Queensland Award. The rules for this year's contest will be found at the end of these notes. We would like to see a lot of activity and receive a good many logs. All stations participating are especially requested to heed the upper frequency limitations on each band.

THE AMATEUR ADVISORY COMMITTEE

Recently two members of the Queensland Council of the Institute attended a meeting of the Queensland Amateur Advisory Committee. They were able to report that the committee is alive and well and active in VK4.

The role of the AAC is to advise amateurs who breach the regulations that they are in fact operating contrary to the rules as laid down by the Department of Communications and to guide offenders. The AAC is most certainly not there to act as a policeman for the Department. It is there to advise you and me when we do wrong so as not to incur the wrath of the Department.

It is in our own interest when called by a station owned by a committee member to listen to his advice and accept it as help and not as an admonition. If the friendly advice is not heeded, you will be dealing with the Department, not a fellow amateur.

A member of the AAC addressed our Radio Club Workshop and judging by the attention he received and the questions asked, his attendance was much appreciated.

The Queensland Council recently passed a vote of thanks to the DOC Chairman and amateurs who serve on this committee and fully support the actions of the Queensland Amateur Advisory Committee.

OLD TIMERS' LUNCHEONS

In recent months two old-timers' luncheons have been held in Queensland, one at Southport on the Gold Coast and the other in Brisbane. To be eligible to join these senior amateurs, one must have been licensed prior to 1930. Peter VK4PJ was host at Southport and Harold VK4HB did the honours for the Institute in Brisbane. Peter is our Divisional Historian and Harold, of some three score years and ten, is the "JUNIOR" Vice-President on the 1982 Council. Of course, we have an ulterior motive in promoting these get-togethers, all the yarn spinning stimulates memories and that is just what our wily historian has in mind.

IPS COURSE

During May, Brisbane amateurs were indeed fortunate to be invited to attend a series of lectures given one evening by Dr. Leo MacNamara, head of the Australian Ionispheric Prediction Service. Dr. MacNamara's lectures were very well presented and of very great interest. He shed a lot of light on how the radio waves that we transmit do or do not get to their destinations.

If you people in other States have the chance to hear Leo, don't miss the opportunity. ■

THE SUNSHINE STATE "JACK FILES MEMORIAL CONTEST"

All radio amateurs throughout the world are invited to participate in this contest, the aims of which are to perpetuate the memory of the late Jack Files and to enable amateurs to work stations for the Worked All Queensland Award and other awards issued by amateur radio clubs in Queensland.

DATE AND TIME

Saturday, July 17, 0830-1300Z (1830-2300K).

DIVISIONS AND SECTIONS

1. STATIONS WITHIN VK4:
   (a) TX ALL BANDS.
   (b) TX HF ONLY.
   (c) TX VHF UHF ONLY.
   (d) TX ALL BANDS CLUB STATIONS.
2. STATIONS OUTSIDE VK4:
   (a) TX ALL BANDS.
3. SWLs:
   (a) RX ALL BANDS.

RULES

1. CONTACTS via repeaters or cross-band or cross-mode are NOT permitted for scoring purposes.
2. STATIONS may be worked repeatedly on all bands and modes provided that one hour has elapsed since the previous contact on that band and mode.
3. SCORING:—
   (a) Stations within VK4: HF/VHF/UHF contacts to Other City or Shire, 5 points. Same City or Shire, 3 points. Outside VK4, 1 point.
   (b) Stations outside VK4: HF, VHF, UHF contacts to VK stations, 1 point; no points for other call areas.
   (c) SWLs: HF, VHF, UHF stations logged as per rule 2, 1 point.
   In accordance with the aims, bonus points as follows apply: For the first contact to each Queensland City or Shire on each band, 10 points. For every contact with a VK4 club station, 10 points. These are additional to the points above.
4. On the various HF bands, it is recommended that operation be below 1820, 3600, 7075, 14175, 21175, 28450 kHz.
5. ALL LOGS shall show date, GMT, band, mode, call, n-sent, n-received and points. There must be a front sheet with the usual station, Division and score details and declaration. Entrants in Division 1 (a) will also be considered entrants in 1 (b) and 1 (c) provided the score is shown separately on front sheet. Logs must reach the WIAQ Contest Manager, PO Box 964, Townsville, Qld. 4810, before 2nd August, 1982.
6. AWARDS will be given to the highest score in each section. However, should a contestant receive an award in one section, he will not be eligible for an award in any other section.
7. THE CONTEST MANAGER's decision will be final and no dispute will be entered into.

W. G. Sebbens VK4XZ,
VK4 Contest Manager. ■

VK3 WIA NOTES

David Johnson VK3YWZ
62 Naples Road, Mentone, Vic. 3194

OFFICE BEARERS

At the first meeting of Council for 1982/83 the following people were elected to office-bearer positions:—

President of Victorian Division and Federal Councillor: Alan Noble VK3BBM.

Vice-President and Membership Co-ordinator: Robert Campiciano VK3YMU.

Secretary, Alternate Federal Councillor and Outwards QSL Officer: Des Clark VK3DES.

Treasurer: Lindsay Rohrlach VK3VIR.

Chairman of the Broadcast and WICEN Committees: Peter Mitchell VK3ANX.

Chairman of Council: Alan Heath VK3KZ.

Vice-Chairman of Council: Keith Scott VK3SS.

Also elected were John Hogan VK3VQV as Zone and Club Liaison Officer, and Council Minute Secretary, Barbara Grey VK3BYK, continues to handle the Inwards QSL Bureau, John Adcock is the Library Officer, Philip Berchdolt organises the classes with Fred Swainston, Ron Cannon and Brian Waldron the instructors, Fred McConnell VK3BOU is the Properties and Equipment Officer as well as the Disposals Officer, and David Johnson VK3YWZ handles AR Liaison, Publicity and Council News.

The Public Relations Officer and Book Officer positions have not yet been filled and Council would be pleased to hear from any volunteers willing to undertake these duties.

INTERFERENCE ON AMATEUR BANDS

It is most important that Council remind all amateurs that it is counterproductive to comment on any deliberate interference observed while on air. This includes particularly interference on repeaters and during broadcasts. Any observations repeated on air serve only to caution the nuisance (and satisfy his unusual predilections) and make DF tracing more difficult. Any observations should be reported to the section handling interference in your nearest Department of Communications office. ■

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

5/17 Cooloongatta Road, Camberwell, Vic 3124

The Editor
Dear Sir,

I refer to page 17 of AR for May 1982, in particular to the story about, and the picture of, the "VK4 OLD-TIMERS' GET-TOGETHER". Some, if not all, of the amateurs concerned were early day stalwarts of the WIA, and I feel it only proper for me, as one who remembers, to make special references to Leo Feenaghty ex VK4LJ.

For the information of those who have forgotten, as well as those who don't know, "Leo J." was the work horse behind the production of the first solely amateur wireless magazine to show up in Australia. It was called "QTC", and comprised a monthly issue of 16 or so sheets of roneod (both sides) foolscap. In the four years and five months of its existence, 53 issues (a full hand) were produced. All workers, including correspondents, gave their services for free throughout. The period concerned were the years 1927-1931, and it is interesting to note that some of the "activists" of that bygone era are still very prominent in amateur radio affairs in Australia today, while quite a few others are on the air daily.

("QTC", by the way, had a subscription rate of 70 cents per annum, post free, and had clients and subscribers in all corners of the globe!)

In late 1931 it would appear that the WIA saw a need for a printed Official Organ and, because of this proposal, Leo Feenaghty decided (to quote his own words) that "THE EXTINCTION" of "QTC" was the only possible course open to him, because he could not continue to publish a book which would be in opposition to the appointed Official Organ of the WIA, as this would be in direct opposition to our policy!

Thus VALE for "QTC" — and the emergence of a successor — both being forerunners of the present AR. For 4½ years pioneer (in the amateur radio journalistic sense) Leo Feenaghty conceived, nourished, fed and nurtured "QTC" from the very vitals of his energy and loyalty to the cause of amateur radio. It is great to know that Leo is still around, mixing it with the gang socially, if not via the airwaves. His magazine is long dead, but its memory and the spirit it created will never die!

Yours faithfully,
Eric Treblicock (L30042) (BCRS-195). ■

44 Wren Street, Altona 3018, Australia

The Editor
Dear Sir,

NETS DON'T OWN FREQUENCIES

Being an ex novice who grew up on low power and the need for nets to have a chance against the high power boys with their 150 ft. high towers and stacked arrays and their kilowatt plus power out. Nets are one way for the little blokes to work some of these short-stay DX expeditions where the QRM is a constant 20 dB over S for the duration of their stay. What hope the QRP operator who sometimes spends up to 14 hours per day for days and still not get through to the rare one? A lot of sleepless nights and QRM from the old girl all for nothing. How much easier to work the rare station on a well controlled net where neither the rare station or the calling station has to put up with the rest of the world creating up to 20 kHz of what sounds like to me, the babble of barnyard chooks.

These well controlled nets therefore save band space of up to 30 kHz. Particularly when the station is transmitting on 195, listening 200-220, you have frequency policemen shilling anyone who goes within 5 kHz of his transmitting frequency, that is 30 kHz down the drain for one station alone. What happened to the "Thou shalt not be more than 3 kHz wide"? You will notice I mentioned well controlled nets, that is the crux of the matter. We, as novices, had a net on 21.183 MHz that had around 200 countries check in and not once, to my knowledge, was there any hassles or rubbish or bad feelings created by this net. I was therefore very much surprised at what happened after I obtained my full call and was able to operate on the larger range of nets available with this licence. I was at first pleased with the extra rare stations available to me, however, it became apparent that there was something creeping into the amateur bands that was prevalent in the CB bands, and was the reason that a lot of us upgraded to novice then full call to get away from, which, if continued, will give us the "Ugly Australian" image in amateur radio with a large group of overseas amateurs.

As I often listen to and also check into several overseas nets when time permits, I have never heard the same deliberate QRM or derogatory remarks made about their nets; I can only assume that we must be at fault. After listening and operating on the local nets, I must agree with some of the remarks made by some of the overseas amateurs, "DX nets do not own frequencies". There is, however, a tacit agreement that if you are asked politely could the frequency you are now using be taken over by a long established DX net, nobody minds shifting.

However, the latest practice of deliberate (?) bad manners leaves a lot to be desired. One of the latest methods is to start transmitting 1 or 2 kHz up from the net frequency and, when the QRM of stations calling in shift the station on the DX net frequency, then they slide down. That (gentlemen?) is dirty pool. They could ask one station to please QSY, but how do they ask 100 stations calling into a DX net to shift? This is, however, only minor to outright jumping on top of some station who has had use of the frequency and, by the rules and regulations, is allowed to keep it. As the regulations state, if you have forgotten, gentlemen, first listen on frequency, then if you think the frequency is clear, then it is only polite to ask if it is clear, if no reply then transmit.

Not like one of our local net controllers who jumped right on top of an EA station, who had, to my knowledge, been using the so-called exclusive DX frequency for at least 30 minutes before net time. He was 5.9 +20 into VK3 and could not be missed even on a dummy load. When up comes local VK3 net controller and starts taking check-ins spot on his frequency. Quite naturally, the EA station was quite upset. As the EA station was a well known DXer, with many friends around the world, he was most insistent in asking what was going on, however all he got from the local net controller was "There is an EA station causing QRM, please QSY as this is a DX net frequency".

When the EA station was at last acknowledged, due to the instance of other overseas amateurs.

The reply from the net controller was "You are 5.9 +20 dB, OM. What can we do for you?"

Question: If he was 5.9 +20 to the net controller, as he had been to me for at least 30 minutes before the net, why jump on him in the first place?

As it turned out, all he wanted was the internationally accepted polite request, could the net use the frequency. He half-heartedly got that request. His reply was "Thank you for asking. I will now QSY." He left the frequency as a gentleman, which is more than I could say for our net controller. I could go on listing offence after offence, but suffice to say, anybody who has listened to the continuing ZL affair, where I have heard the net controller trying to explain to overseas amateurs for up to half an hour at one time, why certain actions were taken to get this amateur rapped over the knuckles, enough said. I do not believe two wrongs make a right, and am not going to enter into the argument as to who is right or wrong, all I am trying to point out is that it should not have happened in the first place.

As you always have a group of hotheads in any collective group, I only hope that it does not degenerate to the situation that arose a few years ago that was much publicised in a local national magazine, where a group of CBers got it into their heads that a local amateur was causing deliberate QRM on 27 MHz. They descended on his house in a convoy of cars, cut his coax for HF, UHF and VHF, some of it costing $3.50 per foot, and threatened him with physical harm. After the police had arrived and sorted things out, it turned out that the interference was located half a mile away from the amateur's QTH. You might say this doesn't happen in amateur ranks, but how often lately have you heard the deliberate QRM by some ratbags?

A lot is also created by fellow amateurs who have some grievances against the net, or the accusations real or imagined, slanted at one particular station, that he is causing QRM, with the net controller saying, "We know where it is coming from, all point your beams to ZL". Only to find that the QRM is coming from VK, or the States or Europe, but not ZL. Talk about give a dog a bad name. How come nets like the Caribbean or Seanet or the Round Table etc, just to name a few, don't get the same recurring problems we get down here. Maybe we have upset more people than we think. Perhaps it is time we stepped back and had a good look at our operating methods, as we don't want the majority of hard-working, conscientious net controllers, who do a thankless task just to help out his fellow amateurs, get that rare one, being bypassed by those rare stations because of the image created by a couple of inconsiderate acts of VK net controllers who should know better.

Let's face it, we as net operators are only a small minority group compared to the number of amateurs operating around the world on many modes, all trying to help one another. Why should we be one of the few areas in amateur radio where ill feelings are created? Who cares if the net is plus or minus 5 kHz? If they want to join the net they will find you.

CONCLUSION

Before you shout see who's about
Nets don't own frequencies

Jim Joyce VK3DFD ■

10 Colchester Drive, East Doncaster 3109

The Editor
Dear Sir,

THE "SILENTS", THE "TALKIES" AND THE HAMS THAT MADE THEM GO!

For posterity I am moved to ask those who may have something to say of hams they know, once knew, or be it themselves engaged in the film projectionists' industry.

This profession and amateur radio seem to have endured a very close affinity with each other since both were invented — or so I have noticed!

Now in the fullness of time there's quite a tale to be told.

Many humorous overtones go with such stories which I hope "Amateur Radio" may publish with appropriate acknowledgement to any who contribute such interesting information in this arena.

VK3CD. OTHR.

73 Alan Campbell-Drury VK3CD ■

24 Werat Drive, Ringwood

The Editor,
Dear Sir,
In reply to Leslie Arnold VK7AM may I tell briefly of how the new badge (International Diamond) does offer immediate recognition.

I was in USA during March-April and wearing the new badge in my lapel. I was stopped on a number of occasions by people who recognised the badge and symbols and were interested to hear of AR in Australia. I showed them the original badge and other than indicating Australia they said they would not have stopped me, as with all badges details are too fine to see at a distance, whereas the diamond had a characteristic style.

There is no reason why both badges cannot be worn (after all we do have two National Anthems now), the choice of which is determined by the particular occasion.

Yours faithfully,
Geoff Atkinson VK3YFA. ■

30 Somerville Road, Hornsby Heights, NSW 2077

The Editor,
Dear Sir,
Could we please draw attention to a misconception that exists regarding the CW 'Gentlemen's agreement' and with which surprisingly, a great number of amateurs are apparently unfamiliar.

The "Gentlemen's agreement" refers to voice contacts not being made in the CW segment of the various bands. BUT DOES NOT imply that CW contacts cannot be made in the phone section of the bands. It has been my experience that a lot of people are not sure of the interpretation of this agreement and in fact, some amateurs have been heard to castigate others for operating CW in the phone section of the bands.

Perhaps some reference to 'Band Plans' might steer these misinformed people on to the correct path.

Perhaps, hopefully, this reminder might also nudge the conscience of those who habitually frequent the CW section of 15 metres and possibly might allow the 'brass-pounders" to enjoy their QSO without the benefit of two or three SSB contacts infringing. I have specifically the novice calls in mind, who don't have much room to move on the CW section of 15 metres, and two or three SSB transmissions make things very difficult indeed. In short, gentlemen, please abide by the 'Gentlemen's agreement'.

73, Bill Martin VK2EBM. ■

WIA INSERTS INTO AR

☆

NOTICE TO WIA ZONES, CLUBS AND GROUPS

WIA Zone, Club and other Group Secretaries are hereby notified that inserts into AR henceforward will be accepted ONLY direct from a Division and then only by prior arrangement with the Secretary.

All inserts must comply with Postal Regulations and must be received not later than the 26th of the month preceding publication date.

DE-LIGHTED!

Overheard in electrical shop —

Customer "Have you any four-volt, two-watt globes?"

Shopkeeper "For what?"

Customer "No, two!"

Shopkeeper "Two what?"

Customer "Yes."

Shopkeeper "No." ■

TRIO

MODEL PF-810 FUNCTION POWER METER

WRITE FOR BROCHURE

PRICE: $138.75

INC. POSTAGE

FEATURES:

- Wide-band toroidal core-type directional coupler and precise power detector detects a through power accurately. Flat frequency response from 1.8 to 200MHz eliminates the need for seeing on a calibration chart and calibrating the meter in measurement at each frequency. VSWR can be calibrated even in 1.9 and 3.5 MHz bands if power is over 1W.
- Effective radiated power is the forward wave power, which is fed from the transmitter, subtracted by the reflected wave power, a loss in the antenna. Subtraction is automatically made by a combined wide-band directional coupler and voltage converter making the input-output level relationship linear. Setting FUNCTION switch to "RAD" permits measuring effective radiated power itself. Setting to "FWD" or "REF" allows measuring forward or reflected wave power, accordingly.
- Built-in antenna selector can change over two antenna systems or one antenna and a dummy load.
- Three measurable power ranges, 5W, 25W and 150W, facilitate fine output reading. Additional voltage converter makes the meter scales linear, which is easy to read.

DISTRIBUTED BY —

WILLIAM WILLIS & Co. Pty. Ltd.

98 CANTERBURY ROAD, CANTERBURY, VIC., 3126

PHONE: (03) 836 0707

NEW

CHIRNSIDE VERTICAL ANTENNA

Model

CE-5SS

5 band self supporting

Unlike our Model CE-5B, this vertical needs no guy ropes and stands only 5 metres high, is very easy to erect and can be disassembled again into four pieces in about 45 seconds.

YES, ONLY $89

Just the antenna to have in the boot of your car or caravan for quick portable operation and for JUST $89 you can afford to have one for that occasion.

Specifications

Frequencies ... 80M to 10M.
Impedance ... 50 ohms at resonance.
Power handling ... up to 1 KW PEP on 20-15-10M, up to 400 watts PEP on 80M and 40M.
¼ wave length type operation.
Termination ... SO-239 socket.
Weight ... approx. 3 kg.

See one of our dealers now!
OR
GET ONE DIRECT FROM OUR MAIL ORDER DEPT.

$89 plus freight charges. Bankcard welcome.

CHIRNSIDE ELECTRONICS PTY. LTD.

26 Edwards Rd, CHIRNSIDE PARK, LILYDALE, 3116

Phone (03) 726 7353

SILENT KEYS

It is with deep regret that we record the passing of —

Mr. H. E. HANCOCK	VK2BIC
Mr. A. F. MARSHALL	VK4AF
Mrs. F. V. McKENZIE (OBE)	VK2FV
Mr. W. PURDY	VK2AOP
Mr. T. TOLLAND	VK4TT

OBITUARIES

IAN NICHOLS VK7ZZ

Tasmania lost one of its best known amateurs when Ian Nichols passed away on May 3rd, at the early age of 58. When he was five Ian was accidentally blinded, but he made a remarkable adaption to this infirmity, his activities ranging from house-painting to cricket.

His memory was so remarkable and his perception so acute that, amongst other achievements he obtained the degrees of Bachelor of Arts and Bachelor of Law. The latter part of his working life was spent at the Zinc Works at Risdon, near Hobart.

In 1956 he passed the full examination for the AOCP, and after that the world became his oyster. He was active on all bands from 160 metres to 70 cm and by 1978 he had worked 271 countries and had WAS on 14, 21 and 28 MHz. His numerous contacts were shown by the piles of QSL cards which were handled for him. The outwards ones he typed himself.

Although he used phone when appropriate, his true love was CW, very often in the early hours of the morning. His CW art was also used in helping many candidates pass their CW test. However, his main delight in radio was the personalities with whom he communicated.

Despite his "on air" activities he was deeply engaged in Institute affairs. For many years he was a member of the Executive Council and its legal advisor. Amongst other offices he was for some time a Federal Councillor, and was Vice-President for three terms. Finally he served two terms as President, and was elected a Life Member in 1981.

Although it is hard to imagine how he found the time, Ian had quite a few other interests besides amateur radio. He was an active church member and a busy worker for the welfare of other blind people

Still relatively young when he died, he had certainly lived a full life. He is survived by his widow, Valerie, and a family of five.

Vale, Ian — a true friend to all who were privileged to know you.

Joe Brown VK7BJ. ■

TERENCE CONNOR VK7CT

Our mate Terry passed away April 3rd, 1982, just one week after a severe heart attack, aged 66 years.

He was educated at Rokeby State School and St. Virgil's, later doing a course at "Marconi School of Wireless" in Sydney, worked in auto electrics pre-war — joined the Reserve of the Royal Corps of Signals became involved in WIA, VK7 Division affairs, filling various positions (Council in 1937 to President 1968/1969), as well as running classes for aspiring AOCP students, many of whom were successful. He gained his AOCP No. 1643 on 31/3/36, the call VK7CT on 17/6/36, and was made a WIA Life Member in 1986. His first transmitter was a single 201A self-excited rig on CW, also experimenting on phone by loop modulation. The receiver was a single 0.V1. At Rokeby there was no commercial power, water, sewerage and no transport, so battery operation was used. The batteries were charged from a car generator driven from a "Douglas" motor cycle engine with one cylinder blocked off. Genemotor operation came next. His QTH boasted one advantage — "NO NOISE".

He was called up by the Army as Sergeant and married before serving overseas in the Middle East and New Guinea with the 9th Australian Division of Signals, attaining the rank of Captain. On demob he resumed his pre-war occupation and was promoted to Manager in 1949. A move to Huonville made him the southern-most VK7 III 1961, when he moved to Hobart as sales representative with an electrical and engineering firm, from which he retired in 1977. Terry and his wife then toured Europe and England, calling on RSGB Headquarters and being entertained by them and meeting the faces of the voices he knew. He was given the honour of entering his name and call in their visitors' book, finding he was apparently only the second VK7 to do so.

He was one of the original members of the VK7 sewing circle, 3.590 MHz, 1700/1800 daily, which started after the war and was a regular on that net till a few days before taking ill.

He is survived by his wife, Adeline, a son, Brien, and three daughters, Judy, Katy and Jill.

Bill Tanner VK7TE. ■

ERIC HANCOCK VK2BIC

It is with regret I announce the passing of Eric Hancock VK2BIC, of Broken Hill, at his home on April 6th, 1982, after a long illness.

Eric gained his novice licence late in life with the call sign VK2NCL, and operated late into the night on many occasions, before gaining his full call, VK2BIC. Eric then became interested in radio teletype, which took up much of his time, as he was a telegraphist for many years with the PMG before becoming Postmaster at Broken Hill.

His presence will be sadly missed here, and I have no doubt also on the air, by all who knew him. Our deepest sympathy is extended to his wife, Edith, and his two daughters, Lurlene and Lorraine.

Randall Lawrence VK2KKL. ■

Mrs F. V. McKENZIE (nee Wallace), O.B.E. VK2FV

Mrs. Mac, as she was known to her multitude of friends, passed away on Sunday, May 23rd, 1982, in her 90th year.

In the 1920s, Mrs. Mac became Australia's first qualified female electrical engineer, the first licensed woman radio amateur, and the first woman member of the WIA.

Born in Melbourne on September 28th, 1892, and subsequently moving to Sydney with her parents, she was educated at Sydney Girls' High School.

Always fascinated by all things electrical, at a very early age she was able to fix lights, repair fuses, and even rewired the family home. On finishing school, Mrs. Mac enrolled in the diploma course of electrical engineering at Sydney University, and graduated in 1923. Just five feet tall and usually wearing blue overalls, she proudly admitted to being treated as an equal by the men she worked with.

After meeting, and eventually marrying, Cecil McKenzie, another electrical engineer, they opened an electrical shop in No. 6 Royal Arcade, supplying goods to electrical contractors. Realising the increasing demand for "wireless bits and pieces", she and her husband began stocking more radio parts and less electrical contractors' supplies.

She was a very skilled telegraphist, amazing people with her skill, and she also developed into a natural teacher. Around this time Mrs. Mac, together with three others, started a magazine — "Wireless Weekly" — eventually bowing out when the financial pressure became too great. The "Wireless Weekly" went on to become Australia's well known electronics monthly, "Electronics Australia."

She wrote a cookery book and, at the request of the Education Department, also wrote an electrical safety book for children, as well as forming the Electrical Association for Women.

In 1939, realising that war was looming in Europe, she started teaching more than 50 enthusiastic girls the art of signalling techniques and the Morse Code, and as the number of trainees escalated, the Women's Emergency Signalling Corps was formed. It was a group of girls from this corps who eventually became the nucleus of the WRANS, formed in 1941.

Many of the girls of the WESC helped Mrs. Mac by acting as tutors in her training school, opened in an old warehouse in Clarence Street, Sydney.

Mrs. Mac received many requests for help, and up to 12,000 men passed through her training school during World War II, including American service personnel from the USAF and USMC, all receiving instruction from Mrs. Mac and her girls. No fees were ever charged, the girls helping with the rent, etc., by donating a shilling a week each.

After World War II, Mrs. Mac was awarded the OBE in recognition of her services, and continued her work, training pilots in Morse Code, to enable them to get work with Qantas, and also trained members of the Police Force, keeping her school operating for nine years after World War II.

A friend of Albert Einstein, she corresponded with him regularly until his death in 1955.

By 1954 the services all had sufficient training establishments for their needs, and the commercial airlines had also set up their own schools, so after training some Torres Straits pilots, Mrs. Mac closed her school and retired.

About 1977 Mrs. Mac suffered a stroke which left her paralysed in one side. Still mentally agile, she went to live in a nursing home at Greenwich. She was still in residence there when she passed away.

In recognition of her outstanding work training the WRANS in World War II, the Royal Navy Amateur Radio Society asked her to become a member of their organization, and were honoured by her acceptance.

Mrs. Mac was elected a Life Member of the Wireless Institute in recognition of her outstanding work, and there are many members of the amateur fraternity who will long retain affectionate memories of Mrs. Mac, from whom they received their training in wireless telegraphy. I am one of them.

Ken Matthews VK2WE. ■

IS YOUR CALL SIGN SHOWN CORRECTLY ON YOUR AR ADDRESS LABEL ?

ADVERTISERS' INDEX

BAIL	46 & 47
BRIGHT STAR	59
CW ELECTRONICS	59
CHIRNSIDE	56
DICK SMITH	37 & 60
EASTERN COMMUNICATION	2
EMONA	15
GFS	30 & 31
GILCO	15
GRAEME SCOTT	59
HI-TEC	31
KNOXTRONICS	4
MAGPUBS	10
SCALAR	36
TIME PLUS	31
VK2 SLOW MORSE	4
WERNER WULF	47
WILLIS	33 & 56
WORLD WIDE RADIO	33

HAMADS

PLEASE NOTE: If you are advertising items FOR SALE and WANTED, please write on separate sheets, including ALL details, e.g. Name, Address, on both. Please write copy for your Hamad as clearly as possible, preferably typed.

- Eight lines free to all WIA members
  $9 per 10 words minimum for non-members.
- Copy in typescript please or in block letters to P.O. Box 150, Toorak, Vic. 3142.
- Repeats may be charged at full rates.
- Closing date: 1st day of the month preceding publication. Cancellations received after about 12th of the month cannot be processed.
- QTHR means address is correct as set out in the WIA current Call Book.

TRADE HAMADS

Conditions for commercial advertising are as follows: The rate is $10 for 4 lines, plus $2 per line (or part thereof) minimum charge $10 pre-payable. Copy is required by the first day of the month preceding publication.

Ordinary Hamads submitted from members who are deemed to be in the general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being resold for merchandising purposes.

Amidon Ferromagnetic Cores: Large range for all receiver and transmitter applications. For data and price list send 105 x 220 SASE to: R.J. & U.S. Imports, Box 157, Mortdale, NSW 2223. (No enquiries at office: 11 Macken St., Oakley, 2223).

CB Radios $69; walkie talkies, short wave radios, military, outback, business, amateur, marine, repairs, RTTY Siemens 100A printer $120; base mic., $45; ultrasonic alarm, $35; all ham bands on a single 6 ft. whip, 1.6 to 30 MHz, for base or mobile, $300; aerials, installation, demonstrations, 40 ch. CB conversions, accessories, new rigs weekly. Bridge Disposals, 12 Old Town Plaza, opp. Bankstown Railway Station, NSW. Mail order service and all enquiries to 2 Griffith Avenue, Roseville 2069, or phone Sam VK2BVS, 7 p.m. to 9 p.m. only, on (02) 407 1066.

SWAP

Unemployed with very little finance would like to swap a Realistic DX100 in exc. cond., 520 kHz to 30 MHz in 4 bands with orig. box and manual, and small cash outlay for a full coverage Rx with a LED readout. Write to Peter Kenyon L30037, PO Box 658, Ballarat 3350, Victoria.

WANTED

Yaesu Linear Amp. FL2100B and external VFO FV101B. Details to VK3ZY, QTHR. Ph. (03) 630 5468 Bus., or 277 4748 AH.

R390A R392/URR Comm. Rx, also Barlow Wadley XCR30 Mk. II Rx and port. oscilloscope, Trio CO-1303D or similar. VK5QQ, QTHR. Ph. (08) 263 6377.

Copy of Hand Book and Circuit for Yaesu FL-50 transmitter and FV-50 VFO. VK2DJS, PO Box 150, Panania, NSW 2213.

Crystals for AWA Carphone Mods. — 4.0511 MHz, 4.0667 MHz, 4.0688 MHz, 10.3729 MHz, 10.400 MHz, 10.4166 MHz, also 36.4775 MHz overtone. Contact VK2DWF, 3/157 Brook Street, Coogee, NSW 2034. Ph. (02) 664 1306.

Old 78 Gramophone Records, also 16 in. transcription discs. VK3NJ, QTHR. Ph. (03) 546 4924.

Invalid Pensioner wants Pye Cambridge FM hi-band. Please write to David Stevens, C/o Cannon Hill PO, 4170 Cannon Hill.

FOR SALE

BC348Q ex Sig. Corps Rx, 0-18 MHz, complete with power supply and speaker, good cond., $50. VK2BSM. Ph. (02) 869 2402.

Beam Antenna, the famous TH3 Mk. 3 HF yagi by Hygain, exc. cond., complete with instructions, $220, ONO. Ph. (03) 465 2991.

Capacitors for that 1 kW final ex RAAF and Army transformers, from 1,650 to 2,000 volts aside, oil-filled capacitors 1 kV to 6 kV, sizes 1 to 4 MFD, four 813s unused, two 833s used, but OK, cheap. Claude VK2CD, QTHR. Ph. (02) 419 7283.

Comm. Rx, R-1000 Kenwood, Mizuho ant. tuner KX-3, $300, ONO. R. A. Duncan L50355, Flat G4-4, Flinders Drive, Bedford Park 5042.

Comp. Mem. Boards for S100 Bus. 8k static Ram, 2 boards, $80 each; 16k Eprom board, incl. 4 Eproms (2708), $60. Andrew VK7AW. QTHR. Ph. (002) 20 8705 Bus., (002) 28 5807 AH.

C13 ex Army HF Txcvr., 1.-11 MHz in 1 MHz steps, home-brew power supply for Rx to suit (includes 100 kHz xtal), full service documents, $80. Tim Robinson VK3YBP. Ph. (03) 341 6384 or (03) 489 7373.

Deceased Estate (VK2BIC): Uniden 2020 80-10m Txcvr., $500; Argonaut 509 80-10m QRP Txcvr., $300; Barlow Wadley XCR-30 ptbl. Rx, $160; Lunar HF3 100L2 HF linear, $180; Fanfare 182 18 channel AM CB, $50; Hustler HF mobile ant., 80, 40, 20, 10m plus base and spring, $100; 2 x 7 el. 2m beams, $25 ea ; Trio AG-202A audio freq. generator, $145; Icom 22S 2m FM Txcvr., $220; Xitec SCT-100 single card video terminal plus 756 keyboard, $165; Micro Modules, 2m 100W linear, $250; 2 Osker Block power SWR meters, $30 ea ; Archer double range multimeter, $20; oscilloscope, $20; 5 position coax switch, $20; headset with boom mike, $20; 24-hour digital clock, $25; 50 ohm dummy load, $10; extension speaker, $6; 50 uA meter, $5; 100 mA meter, $5; Apollo variable PS, 3A, $20; variable PS, 1A, $15; OP-80A paper tape reader kit, $45; 12 hr. clock, $10; vacuum base vice, $8; KW Atlanta, 80-10m spare finals Txcvr., $200; FT75B, 3 xta's each band, DC and AC PS, $280; Trio 9R-59D Rx, $90; all prices negotiable. Randall Lawrence VK2KKL. Ph. (080) 5285.

Drake R4-C, mint cond., approx. 200 hours use, in manufacturer's carton with hand book, $400, ONO. Chris. Ph. (08) 227 4401 Bus., (08) 271 0167 pm and weekends.

Drake TR4CW and MS4 Speaker Power Supply, complete with interconnecting cable and manual, $810. VK2BYZ, Box 226, PO Caringbah, NSW 2229.

Icom IC-22S with digital readout, in good working order, complete with mic., mobile mount, manual, etc., $210, ONO. VK2BVO, QTHR. Ph. (043) 92 2244.

Kyokuto 108X R2 144 MHz FM dig. PLL synthesised Txcvr., 800 chan., very good order, with mike and instr. book, $200, ONO. VK3PR, QTHR. Ph. (056) 62 2711 all hours.

Valves: Transmitter valves — EIMAC, two 4CX250B, one 4CX250F/G, one 4CX300A (c/w socket); Philips — one QE04/7, two QQE06/40 (c/w sockets); RCA — two 3E29 (c/w sockets). All new and tested, money back guarantee. Reasonable offers to VK4AJR, QTHR.

Linear Amp., 1KD-5 Henry radio, 12 mths. old, only 5 hours work, good cond., $500; RTTY station, comp., Tono 7000E, CRT-10 monitor, HC-800 impact printer with paper supply, approx. 12 mths. old, $1,700, or will sell sep.; Txcvr., 2m FM standard comm. SR-C145A, hand-held, nicad batts., and charger, $175; Hewlett Packard 25C calculator with nicad bat. and charger, manual, $125. VK3AAP, QTHR. Ph. (055) 62 6016.

Muffin Fans, 120 mm x 120 mm, 240V AC, 14W, $8 ea.; air filters to suit, $2 ea.; security locks, circular key attached to 3 pos. switch, $5 ea.; circuit board with 4 off 2N3771 (2N3055), 2 off 40430, 1 off IN4560 5.1V 6A zener, etc., $3 ea.; instrument cases, plated steel, with various components, suit power supply, $5 ea. VK3BEE, QTHR. Ph. (03) 209 8410, AH (03) 795 9413, ask for Ron.

QTH for Sale, 15 Gore Street, Endeavour Hills; repeaters 3RML, 3RLV, 3RMM, 3RGL, easily contacted; house 11 square BV, gas heating. Enquire VK3LV, QTHR. Ph. (03) 555 7459.

Realistic DX302 Rcvr., as new, with orig. packing and manual, $290, ONO; high quality log books, 1,000 entries, $2.90, incl. postage. Contact Philip VK2DPN, QTHR. Ph. (049) 43 4220.

Complete RTTY-CW Terminal (all you need extra is your Txcvr.), Robot 800 terminal keyboard, plus Dick Smith X-1198 video monitor, as new, $850 the lot. Alf Chandler VK3LC, QTHR. Ph. (03) 99 5344.

RTTY Terminal, XITEX SCT-100 (S100 compat., 128 character set, user programmable band rates in ASCII and Baudot, cursor controls, current loop, on board power supply), $175, ONO; VDU AWA VTE-7, intelligent terminal (ex Telecom), $70, ONO; Freq. Meter, Bendix 8C221, $50, ONO; AF BFO (AWA) 20 Hz-20 kHz, O/P to +20 dBm (600), THD 1 per cent, $40, ONO; all equip. exc. cond., with manuals. VK2ARY, QTHR. Ph. (02) 73 2662.

Teletype Model 38, 15 in. tractor/friction feed, serial computer interface, 110 baud pulse generator, plus negative voltage supply, plus box of paper, $480, ONO. Ph. (082) 81 6107.

Yaesu FT290R 2m all mode port. Txcvr. and Mirage B23 linear amp. (30W), $350; Icom IC701 (no PS), $725; all e.c., orig. cartons, manuals. Reg VK3KK, QTHR. Ph. (03) 652 8260 Bus., (03) 469 4200 AH.

Yaesu FT7B with 10A and 8 crystals, v.g.c., in carton, $425; FRG7 with 3 kHz filter, 6 : 1 tuning and squelch, v.g. cond., $200, both ONO. VK2EAU/NTA, QTHR. Ph. (049) 59 3413.

T1200 Hand-held 2m Txcvr., with extra SS whip antenna and charger, as new, $265; also latest Chimside CE35LX 5 el. tri-band beam, new, unused, with higain ba'un, $295. Ph. (02) 86 4596.

Linear Amplifier, Yaesu FL2100Z, late model, all 9 WARC bands, immac. cond., $500, ONO, plus freight; Tono 7000E communications computer, RTTY/CW/ASCII, with new 30 cm monitor, $920, ONO, plus freight. VK3BCY. Ph. (03) 458 3393.

Yaesu FLDX2000 Linear, 1200W PEP, plus 5 spare 6KD6s, $200; also four 6JS6C and one 7360 valves, brand new, $60 the lot. VK2AIT, QTHR. Ph. (02) 86 4785.

Yaesu FT101E, good cond., very little use, AC/DC, novice modified at present, 27 MHz crystal fitted, $500. VK4NIK, QTHR. Ph. (07) 345 2486.

Yaesu FT101E, orig. packing, manual, all cords, mike, $550. Ken VK3KGX, St. Kilda, Vic. Ph. (03) 658 3869 Bus., (03) 528 4229 AH.

Complete Station: Yaesu FT-107M Txcvr. (new), no WARC, $750; FC-707 ant. coupler, $120; Oskerblock PWR/SWR, $40; home-brew 5A supply, $30; much more. VK3VSM, 8 Taylor Avenue, Reservoir, Vic.

Yaesu FT901DM with CW filter, new spare tubes, owner's and service manual included, FV901DM scanning VFO with 40 memories, SP901P comm. speaker phone patch equipment, as new cond., little use, urgent sale, all offers considered. John, PO Box 505, Bondi Junction 2002. Ph. (02) 389 6455 Bus.,

2650 Microcomputer Owners: Sell 78UP9 and 78UP10 PC expansion boards (8k Ram), including 14 Ram chips and 15 buffers, etc., chips, all caps and IC sockets (no other parts needed), photostats of the orig. EA article included, present total cost $85, sell for $60; also Alan Peek's micro-basic tape and full instructions, $7; all unused. VK2AZT. Ph. (069) 42 1392.

BRIGHT STAR CRYSTALS PTY. LTD.

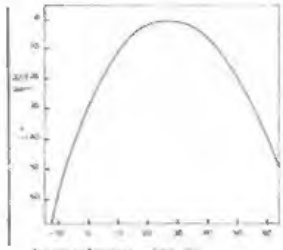
35 EILEEN ROAD, CLAYTON, VICTORIA. (03) 546 5076
(All Mail to: P.O. BOX 42, SPRINGVALE, VIC. 3171)

B.S.C. TELEX AA 36004

INTERSTATE AGENTS:
- ROGERS ELECTRONICS ADELAIDE. 42 6666
- MASTER COMMUNICATIONS SYDNEY. 682 5044
- DILMOND INSTRUMENTS HOBART. 47 9077

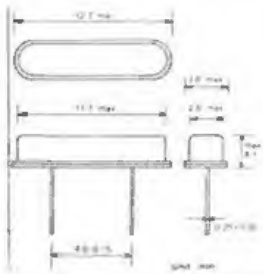
WATCH CRYSTALS

- WESTEST ELECTRONICS PERTH. 337 6393
- FRED HOE & SONS PTY. LTD. BRISBANE. 277 4311



SPECIFICATIONS

1	Nominal Frequency	32 768 KHz
2	Frequency Tolerance	+30 ppm/28° +1°C
3	Drive Level	1μW max
4	Series Resistance	31 0 kOhms max
5	Q Factor	40,000 min
6	Parabolic Curvature Constant	Less than —0 04 ppm/°C (Refer Fig 1)
7	Turnover Temperature	28 0°C +5°C
8	Capacitance Ratio	700 max
9	Storage Temperature Range	—30°C +80°C
10	Operating Temperature Range	—10°C +60°C
11	Aging rate	Less than +5 ppm/year
12	Shock	Less than 5 ppm for 50 cm Hammer Shock Test
13	Package Size	



W0603

Data Sheet Available. Also Available Crystal Units for Quartz Crystal Clock.

WE SUPPLY A WIDE RANGE OF CRYSTALS FOR COMMERCIAL AND AMATEUR PURPOSES

WANTED

Novice Radio Operators

(TO BE)

If you want to study for your Novice Licence, then there is a new book just released which contains all the study material you will need to sit for the DOC licence exam.

It's called **THE NOVICE OPERATORS THEORY HANDBOOK.** Copies are available at **$7.50 packed and posted.**

Write to:

GRAEME SCOTT VK3ZR
11 Balmoral Crescent, Surrey Hills 3127

OR

SANDY BRUCE-SMITH VK2AD
110 Rosemead Rd., Hornsby NSW 2077

OR

Contact your local WIA Division or local book dealer.

W0619

I'VE RE-ORGANISED MY STORES- YOU REAP THE BENEFITS!!

NOW THERE'S A DICK SMITH STORE NEAR YOU WITH A

DICK SMITH HAM SHACK

- **A full, comprehensive range of amateur equipment and accessories at the most competitive prices!**
- **Run by a licensed amateur - with full information on all gear and technical specifications. With demo equipment in operation - and a 'HOT LINE' to the head office YAESU technical support facility**
- **It's the best thing to happen to amateur radio in Australia: ever!**

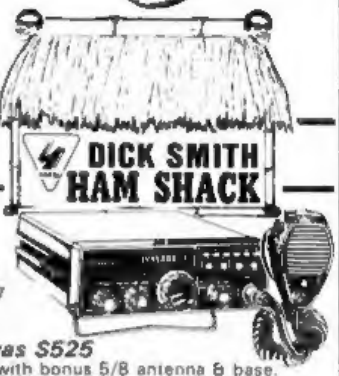
CHECK OUT THESE SUPER DEALS AT YOUR

DICK SMITH HAM SHACK

FT208R
2 metre hand held 800 channel fully synthesised hand held with LCD readout
Cat. D-2889
~~$368~~ **$325**

~~$795~~ **$765**
FT707 HF mobile
Talk to the world from your car/boat or plane. Full HF band coverage. 100W. Ideal mobile (or base with optional supply.)
Cat. D-2869

FP707 13.8V was ~~$186~~ **$168**
Mains power supply to suit FT707. Cat Cat.D-2895

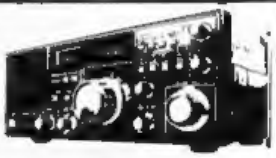


FT408R 2 metre
THE BIG GUN!!!
All mode 2 metre with everything that opens and shuts! Cat. D-2887
$514 was $525
with bonus 5/8 antenna & base. THIS MONTH ONLY.

FT230R
2 metre mobile. Amazingly small - but a full 25w output. Ideal for today's compact cars.
Cat. D-2893
~~$375~~ **$359**

FL2100Z
For real amateur power! Run your station at maximum legal power - and the FL2100Z is just coasting. Cat. D-2548
~~$580~~ **$568**

FRG7700
The go anywhere all mode receiver. Covers everything from 150kHz to 30MHz.
Cat. D-2840
$525 ~~$589~~



~~$395~~ **$349**
FT290R
2 metre all mode portable/mobile. Our most popular 2 metre rig! Loaded with features, incredible performer.
Cat. D-2885

FT-ONE THE ULTIMATE
Every ham's dream - now can be yours. And this month ONLY get a bonus FM board absolutely FREE with your FT-ONE
Sells for $2995 in the USA. Cat. D-2852
$1975

DEMO AND STORE STOCK with full **12 months** warranty . . . making room for new models . . . you reap the benefit!!!

	DESCRIPTION	CAT	WAS	NOW
FT207R	2m h/held -ONLY A FEW LEFT!	D-2888	$358	$235.00
PA2	Mobile charger for FT207	D-2994	$29.95	$19.95
SPECIAL OFFER	BOTH OF THE ABOVE FOR A RIDICULOUS			$246.50!!!!
FT107M	HF band, all solid state	D-2863		$850.00
FT720RVH	2 metre 25W *save $80*	D-2890	$449.95	$369.95
FT101ZD	The Famous '101' *save $60!!*	D-2859	$910	$850.00
FT227RB	2 metre with scanning *save $60*	D-2891	$379	$319.00
FV707DM	Digital VFO for 707	D-2896	$299.50	$285.00
MM02	Mobile bracket for 707	D-2897	$36.00	$25.95
FT107DMS	HF WARC band, with DMS *SAVE $103*	D-2871		$1225
FT7B	HF solid state mobile	D-2868	$599	$549
FT901D	HF base station	D-2854	$1075	$950.00
901DC CONV	DC/DC Converter for FT901/902	D-2856	$69.00	$49.00
SPECIAL OFFER	BOTH OF THE ABOVE (D-2854/2856) FOR ONLY			$990
901 MEM	Memory unit for FT901/FT902	D-2858	$139.50	$99.00

Galbraith Paddle - make your own Morse Keyer D-7103 ONLY $14.95

Some stores have little - or no - stock available. Jim Powell (02) 888 3200 knows where all these bargains are!!!

Come in & checkout these bargains, talk to the specialist - Play with the gear - Then buy the best at the BEST PRICE with the famous Dick Smith 12 month full warranty & terrific after sales service - You can't go wrong with Dick!!!!!

NOW BACK IN STOCK!

Dick Smith's Australian Amateur Radio Handbook. All new, completely revised edition. Everything you wanted to know about amateur radio in Australia. Great for the old ham, the young novice or the aspiring hopeful. Cat. B-2320

DICK SMITH Electronics

DICK SMITH HAM SHACK

● SYDNEY 125 York St. 290 3377 ● GORE HILL 162 Pacific Hwy. 439 5311 ● NORTH RYDE 396 Lane Cove Rd. 888 3200 ● PARRAMATTA 30 Grose St. 683 1133 ● ADELAIDE 60 Wright St. 212 1962 ● MELBOURNE 399 Lonsdale St. 67 9834 ● SPRINGVALE Dandenong Rd. 547 0522 ● RICHMOND 656 Bridge St. 428 1614 ● PERTH 414 William St. 328 6944 ● BURANDA 166 Logan Rd. 391 6233 ● CHERMSIDE 842 Gympie Rd. 59 6255.

HOBBYISTS EXPERIMENTERS SCOOP PURCHASE
YC221 DIGITAL DISPLAY D2898 **$29.95**
worth over $100
7 digit freq display unit converts to beaut freq. counter

PLEASE NOTE:
The stores at left, stock the complete range of **Dick Smith Amateur Radio equipment.** All other Dick Smith stores stock some amateur equipment, but may not be able to give you the service of the **'HAM SHACK'** stores listed.

A290 F1